STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLAN LEGEND

Town, County, State
Property Lines
R/W Lines-Existing
R/W Lines-Proposed
Culvert-Existing
Culvert Proposed
Curbing — Existing / Proposed
Type 1
Type 3
Type 5
Outline of Bodies of Water
Exposed Bedrock
Buildings
Trees — Conifer / Deciduous
Tree Line
Clearing Limit Line — CLL
Railroad

Catch Basins — Existing / Proposed
Manholes — Existing / Proposed
Proposed Underdrain
Proposed Ditch
Existing Ditch
Utility Poles — Existing / Proposed
Fire Hydrants — Existing / Proposed
Existing Water Line
Existing San. Sewer
Existing San. Sewer Manhole
Guardrail-Existing
Guardrail-Proposed
Guardrail-Cable, Other
Centerline-Existing
Centerline-Proposed
Travelway-Existing
Travelway-Proposed

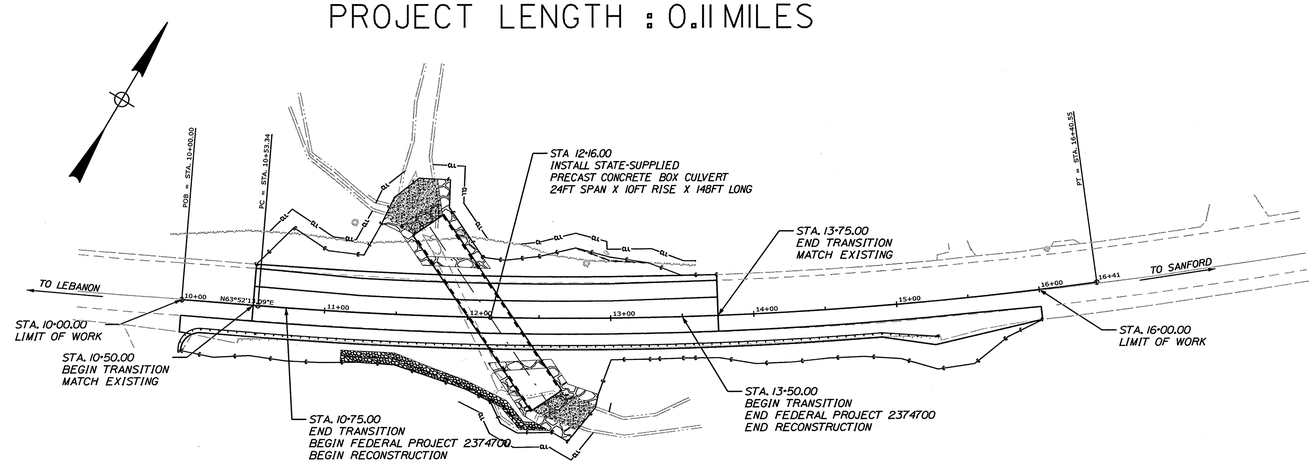
Boring — HB-XXX-###
Pavement Core — PC-#
Test Pit — TP-XXX-###

Probe — P-#.#X
#.# = Depth
X = W (Weathered Rock)
R (Refusal)
NR (No Refusal)

SANFORD
YORK COUNTY
CRANBERRY RIDGE BRIDGE
U.S. ROUTE 202 / ROUTE 11 (LEBANON STREET)
BRIDGE NO. 6701
FEDERAL PROJECT NO. 2374700
PROJECT LENGTH : 0.11 MILES

INDEX OF SHEETS

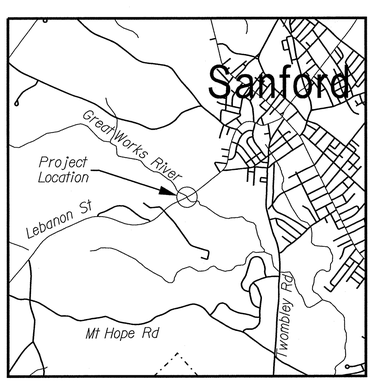
Description	Sheet No.
Title Sheet	1
Typical Section	2
Estimated Quantities & General Notes	3
Construction Notes	4
Culvert Details	5
Streambed Details	6
Boring Location Plan & Interpretive Subsurface Profile	7
Boring Logs	8
Plan and Profile	9
Cross Sections	10-19
Right of Way Map	20



LAYOUT SCALE

50 0 50 100

Scale in Feet



0 1/2 1

Scale in Miles

LOCATION MAP

TRAFFIC DATA

	Lebanon Street
Current (2024) AADT	6260
Future (2044) AADT	6890
DHV - % of AADT	11%
Design Hour Volume	758
% Heavy Trucks (AADT)	14%
Directional Distribution (DHV)	51%
Design Speed (mph)	40
Functional Class:	Principal Arterial
Corridor Priority	1

TYLin

PROJECT LOCATION:	LARGE CULVERT (#46484) LOCATED 0.19 OF A MILE NORTHEAST OF JELLERSON ROAD
PROGRAM AREA:	REGIONAL PROGRAM
SCOPE OF WORK:	LARGE CULVERT REPLACEMENT

WIN 23747.00 FEDERAL PROJECT NO. 2374700

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER	6-4-24
CHIEF ENGINEER	5-28-2024

STATE OF MAINE CHRISTOPHER HELSTROM No. 13550 PROFESSIONAL ENGINEER

PROJECT INFORMATION	
PROGRAM	REGIONAL
PROJECT MANAGER	LARAY HAMILTON
DESIGNER	CHRIS HELSTROM
CONSULTANT	TYLIN
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

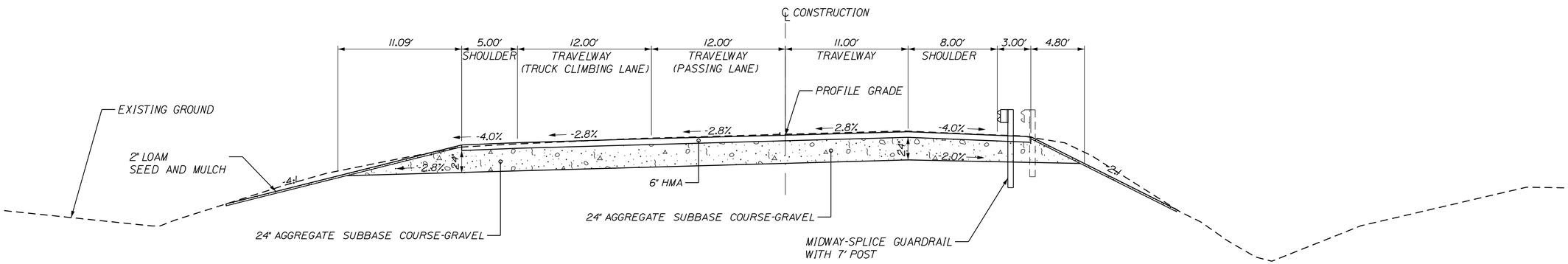
SIGNATURE	
P.E. NUMBER	13550
DATE	3/29/2024

SANFORD
U.S. RTE. 202 / RTE. 11

TITLE SHEET

SHEET NUMBER
1
OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Title_01.dgn Division: HIGHWAY Username: Date:4/8/2024



TRUCK CLIMBING LANE AND GUARDRAIL RT, SUPERELEVATED

Date:4/8/2024 Username: Division: HIGHWAY Filename: ...\MSTA\xxx_Typicals_01.dgn

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

PROJ. MANAGER	L. HAMILTON	BY	DATE
DESIGN-DETAILED	C. Helstrom	L. Soo	06/2023
CHECKED-REVIEWED	D. Myers	C. Helstrom	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

TYPICAL SECTION

SHEET NUMBER
2
OF 20

TYLin

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	1810	CY
203.24	COMMON BORROW	70	CY
203.25	GRANULAR BORROW	800	CY
203.33	SPECIAL FILL	270	CY
206.07	STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	110	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	1820	CY
403.2081	12.5 MM POLYMER MODIFIED HMA	190	TON
403.2131	12.5 MM POLYMER MODIFIED HMA BASE	560	TON
409.15	BITUMINOUS TACK COAT, APPLIED	135	G
508.13	SHEET WATERPROOFING MEMBRANE (180 SY)	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
534.7101	PRECAST CONCRETE BOX CULVERT - STATE SUPPLIED	1	LS
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8' OFFSET BLOCKS, SINGLE FACED)	480	LF
606.1303	31" W-BEAM GUARDRAIL - MID-WAY SPLICE (STEEL POST, 8' OFFSET BLOCKS, 15' RADIUS AND LESS)	25	LF
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL	1	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	3	EA
610.08	PLAIN RIPRAP	270	CY
610.18	STONE DITCH PROTECTION	75	CY
610.210	STREAM CHANNEL ROCK	380	CY
610.212	STREAMBED ROCK FEATURES	80	CY
613.319	EROSION CONTROL BLANKET	20	SY
615.07	LOAM	95	CY
618.14	SEEDING METHOD NUMBER 2	15	UN
619.12	MULCH	15	UN
620.58	EROSION CONTROL GEOTEXTILE	520	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	1575	LF
629.05	HAND LABOR, STRAIGHT TIME	50	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	50	HR
631.172	LARGE TRUCK (INCLUDING OPERATOR)	50	HR
639.19	FIELD OFFICE TYPE B	1	EA
652.312	TYPE III BARRICADE	4	EA
652.33	DRUMS	20	EA
652.34	CONES	80	EA
652.35	CONSTRUCTION SIGNS	500	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	60	CD
652.38	FLAGGERS	150	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
652.61	STAGED CONSTRUCTION AND TRAFFIC CONTROL	1	LS
656.75	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS

GENERAL NOTES:

1. PAVEMENT THICKNESS SHOWN ON THE TYPICAL SECTIONS ARE INTENDED TO BE NOMINAL.

2. ALL CLEARING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. THE ACTUAL LINES FOR CLEARING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AS INDICATED ON THE PLANS AND APPROVED BY THE RESIDENT.

3. ALL INSLOPE AND DITCHES IN CUT AREAS SHALL BE GRADED AS SHOWN ON THE TYPICALS OR FLATTER, OR AS DIRECTED BY THE RESIDENT.

4. ALL WASTE MATERIAL NOT USED ON THE PROJECT SHALL BE DISPOSED OF OFF THE PROJECT IN ACCEPTABLE WASTE AREAS REVIEWED BY THE RESIDENT. GRADING, SEEDING AND MULCHING OF WASTE AREAS SHALL BE CONSIDERED INCIDENTAL.

5. WHEN SUPERELEVATION EXCEEDS THE SLOPE OF THE LOW-SIDE SHOULDER, THE LOW-SIDE SHOULDER WILL HAVE THE SAME SLOPE AS THE TRAVELWAY.

6. CROSS SLOPES FOR NORMAL AND SUPERELEVATED SECTIONS WILL BE STRAIGHT UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.

7. THE ALGEBRAIC DIFFERENCE BETWEEN TRAVELWAY AND SHOULDER CROSS SLOPE SHALL NOT EXCEED 8 PERCENT.

8. LOAM SHALL BE PLACED TO A NOMINAL DEPTH OF 4 INCHES IN LAWN AREAS AND 2 INCHES IN ALL OTHER AREAS UNLESS OTHERWISE NOTED OR DIRECTED.

9. ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT. ALL WORK, EQUIPMENT, AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.

10. THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT FOR THE CONSTRUCTION OF CRANBERRY RIDGE BRIDGE", SOILS REPORT 2024-09, APRIL 1, 2024 CAN BE ACCESSED AT THE MAINEDOT WEBSITE HTTP://WWW.MAINE.GOV/MDOT/CONTRACTORS/.

11. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THE BID DOCUMENTS IS FOR THE USE OF THE BIDDERS. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF THE ACTUAL SUBSURFACE CONDITIONS THROUGHOUT THE CONSTRUCTION SITE. MAINEDOT WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSION DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS PROVIDED IN THE BID DOCUMENTS (IF ANY) PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.

12. AREAS REQUIRING FILL ON THE PROJECT WILL COME FROM SUITABLE EXCAVATION FROM EXCAVATION, DITCH AND INSLOPE OR EQUIPMENT RENTAL AREAS.

13. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT AND LAYOUT OF WORK BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.

14. EXISTING INSLOPES IN PROPOSED FILL AREAS SHALL BE BENCHED BY EXCAVATING STEPS OF SUFFICIENT WIDTH TO PERMIT PLACING AND COMPACTING THE FILL MATERIAL ALONG WITH THE MATERIAL REMOVED.

15. ALL EXISTING GUARDRAIL REMOVED AND NOT REUSED ON THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR. REMOVAL AND DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS.

16. UNLESS OTHERWISE NOTED SEEDING METHOD NO. 1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS; SEEDING METHOD NO. 2 SHALL BE UTILIZED ON ALL OTHER AREAS.

17. FINAL STRIPING FOR THE PROJECT SHALL BE DONE BY THE CONTRACTOR PER THE STRIPING LAYOUT IN THE CONTRACT DOCUMENTS OR AS PROVIDED BY THE DEPARTMENT. PAYMENT SHALL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.

18. CLEARING LIMITS SHALL BE 10 FEET BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINE OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT.

19. GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL.

20. HOLES CREATED BY GUARDRAIL REMOVAL WILL BE FILLED AND COMPACTED WITH APPROVED MATERIALS AS DIRECTED BY THE RESIDENT. PAYMENT WILL BE CONSIDERED INCIDENTAL TO STANDARD SECTION 606, GUARDRAIL. (PRESERVATION ONLY)

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN 23747.00

		BY	DATE
PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	T. Antz	03/2024
CHECKED-REVIEWED	D. Myers	C. Hebstrom	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

GENERAL NOTES AND
ESTIMATED QUANTITIES

SHEET NUMBER

3

OF 20

Filename: ..\MSTA\xxx_GenNotesEstimate.dgn Division: HIGHWAY Username: Date:4/8/2024

ITEM 508.13 SHEET WATERPROOFING MEMBRANE

	QTY.
TO BE PLACED OVER THE TOP AND DOWN 1' OVER EACH SIDE OF THE PROPOSED STRUCTURE.	*1 LS*

ITEM 511.07 COFFERDAM: UPSTREAM

	QTY.
	1 LS

ITEM 511.07 COFFERDAM: UPSTREAM

	QTY.
	1 LS

ITEM 511.07 COFFERDAM: DOWNSTREAM

	QTY.
	1 LS

ITEM 606.1301 31" W-BEAM GUARDRAIL MID-WAY SPLICE, SINGLE FACED

	LENGTH
STA. 10+15, 19' RT TO STA. 14+88, 19' RT	*480 LF*

ITEM 606.1303 31" W-BEAM GUARDRAIL MID-WAY SPLICE, 15' RADIUS AND LESS

	LENGTH
STA. 10+00, 36.9' RT TO STA. 10+15, 19' RT	*25 LF*

ITEM 606.1305 31" W-BEAM GUARDRAIL MID-WAY SPLICE FLARED TERMINAL

	QTY.
STA. 14+88, 19' RT TO STA. 15+27, 25.2' RT	*1 EA*

ITEM 606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER

	QTY.
TO BE PLACED AT THE END OF GR RADIUS AND ENDS OF THE FLARED TERMINAL	*3 EA*

ITEM 610.08 PLAIN RIPRAP

INSTALL CULVERT END PROTECTION AT INLET AND OUTLET AT 2' DEPTH

		RIPRAP PAD INLET
STA. 11+37 LT TO STA. 12+15 LT	*INLET INSLOPE*	*288.73 SF*

		RIPRAP PAD OUTLET
STA. 12+15 RT TO STA. 12+91 RT	*OUTLET INSLOPE*	*245.52 SF*

ITEM 610.18 STONE DITCH PROTECTION

STA. 11+13 RT TO STA. 12+57 RT

ITEM 613.319 EROSION CONTROL BLANKET

STA. 12+75 LT TO STA. 13+27 LT

ITEM 620.58 EROSION CONTROL GEOTEXTILE

	QTY.
TO BE PLACED UNDERNEATH RIPRAP AND STONE DITCH	*520 SY*

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN 23747.00

SIGNATURE

P.E. NUMBER

DATE

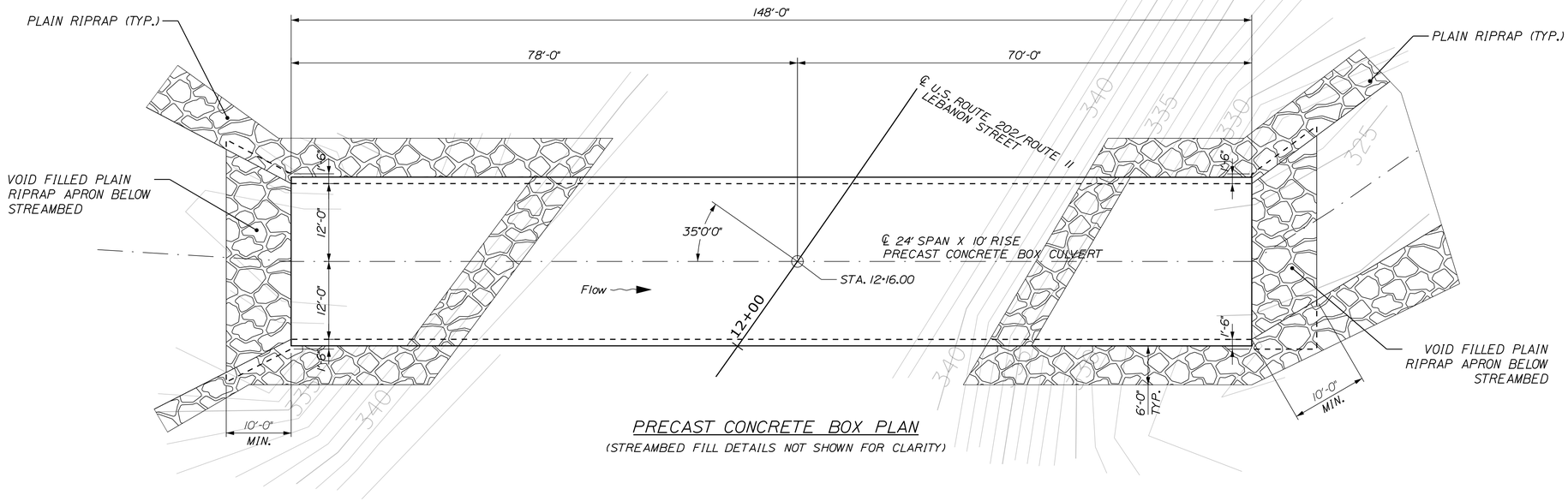
		BY	DATE
PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	T. Antz	03/2024
CHECKED-REVIEWED	S. Davis	C. Heistrom	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SANFORD
U.S. RTE. 202 / RTE. 11

CONSTRUCTION NOTES

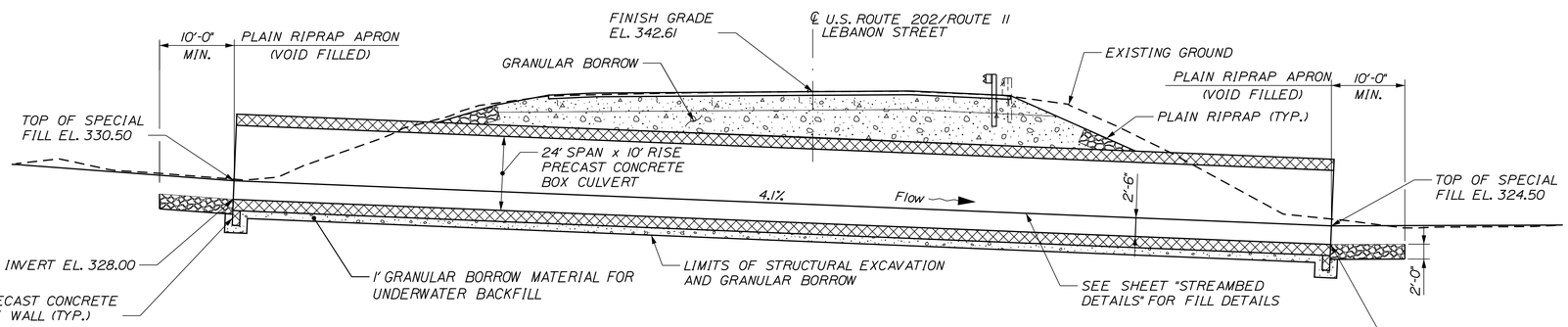
SHEET NUMBER
4
OF 20

Filename: ...\xxx_Construction Notes.dgn Division: HIGHWAY Username: Date:4/8/2024



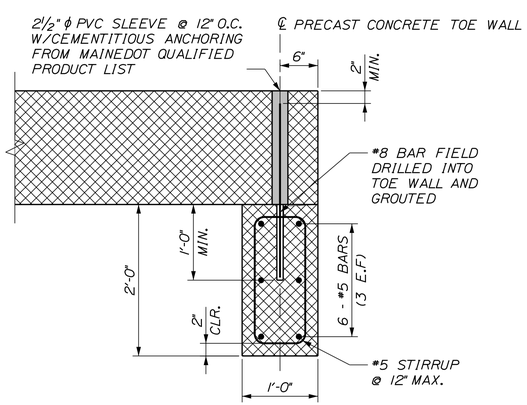
PRECAST CONCRETE BOX PLAN

(STREAMBED FILL DETAILS NOT SHOWN FOR CLARITY)

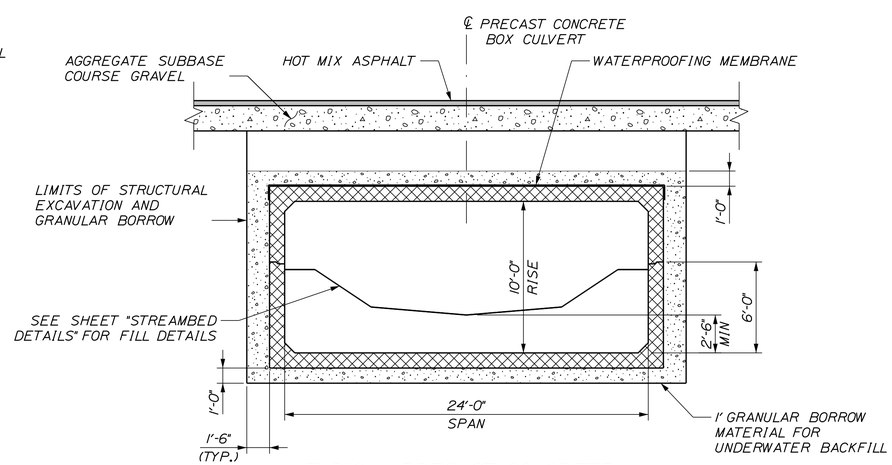


TYPICAL PRECAST CONCRETE BOX LONGITUDINAL SECTION

(SKEWED SECTION)



PRECAST CONCRETE TOE WALL DETAIL



TYPICAL PRECAST CONCRETE BOX SECTION

PRECAST CONCRETE BOX CULVERT NOTES:

1. THE PRECAST CONCRETE BOX CULVERT (STATE SUPPLIED) HAS BEEN DESIGNED TO CARRY CONSTRUCTION LOADINGS WITH A MINIMUM FILL COVER OF 18 INCHES OVER THE TOP OF THE UNITS.

2. THE PRECAST CONCRETE BOX CULVERT SHALL BE BEDDED ON 1 FOOT LAYER OF COMPACTED GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL.

3. THE PRECAST CONCRETE BOX CULVERT (STATE SUPPLIED) IS A "CLAMSHELL" CONFIGURATION, WITH A HORIZONTAL SEAM 6'-0" ABOVE THE INVERT.

4. CONSTRUCTION HANDLING, AND ASSEMBLY OF THE PRECAST UNITS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATION 534 AND THE MANUFACTURER'S SPECIFICATIONS AS APPLICABLE.

5. VOID FILLED PLAIN RIPRAP APRONS SHALL BE CONSTRUCTED OF PLAIN RIPRAP WITH THE VOIDS FILLED WITH A MIXTURE OF 1 PART CRUSHED STONE 5 INCH AND 1 PART TYPE D AGGREGATE FOR SUBBASE IN ACCORDANCE WITH THE PROVISIONS OF SP 610, "STREAM CHANNEL ROCK". COSTS FOR VOID FILLING MATERIALS AND INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO ITEM 610.08, "PLAIN RIPRAP".

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

		BY	DATE
PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	D. Myers	J. Legere	03/2024
CHECKED-REVIEWED	C. Helstrom	D. Myers	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

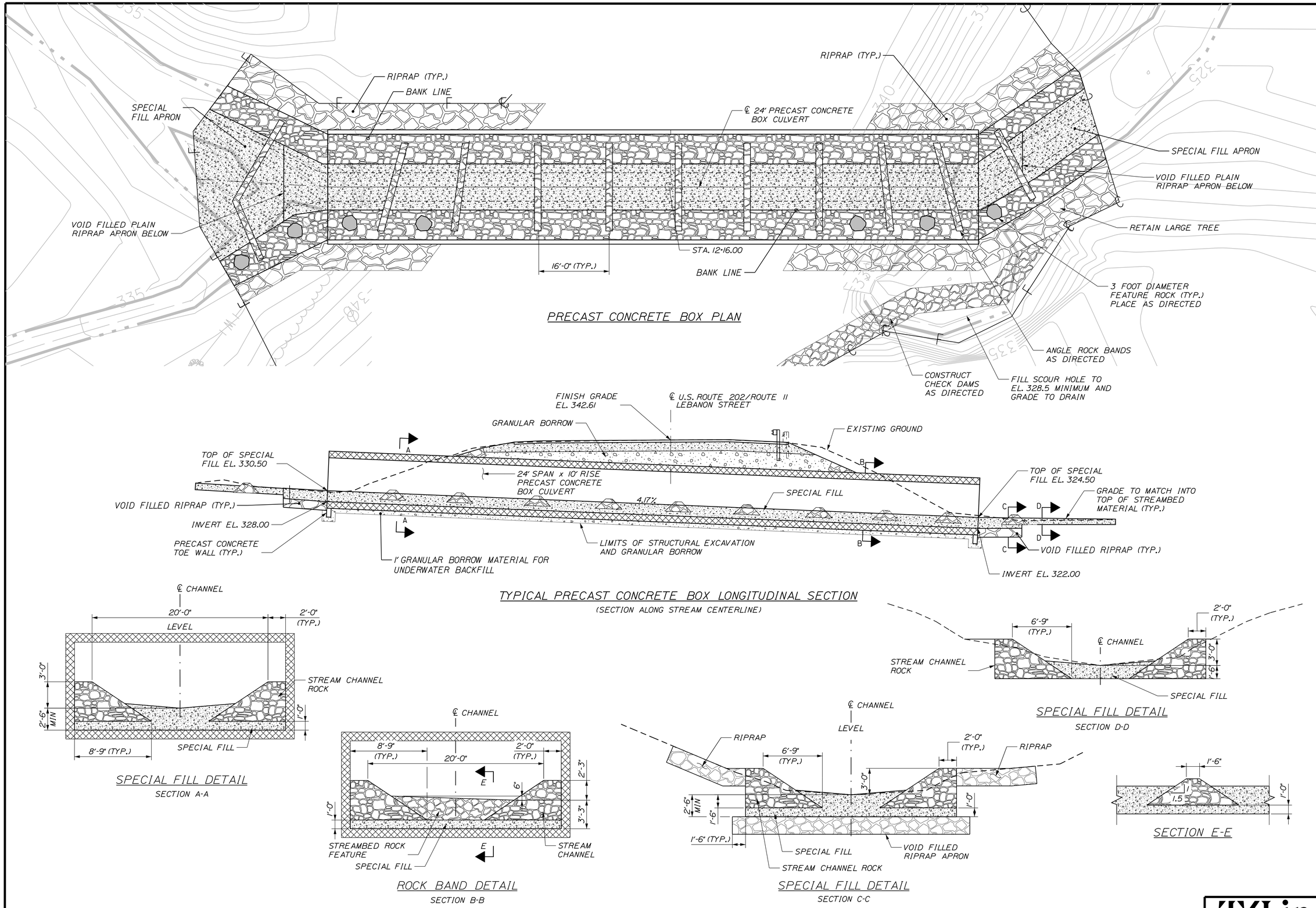
CULVERT DETAILS

SHEET NUMBER

5

OF 20

Filename: ...\MSTA\xxx_Culvert_Det_01.dgn Division: HIGHWAY Username: Date:4/8/2024



PRECAST CONCRETE BOX PLAN

TYPICAL PRECAST CONCRETE BOX LONGITUDINAL SECTION

(SECTION ALONG STREAM CENTERLINE)

SPECIAL FILL DETAIL

SECTION A-A

SPECIAL FILL DETAIL

SECTION D-D

ROCK BAND DETAIL

SECTION B-B

SPECIAL FILL DETAIL

SECTION C-C

SECTION E-E

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN 23747.00

SIGNATURE

P.E. NUMBER

DATE

PROJ. MANAGER	L. HAMILTON	BY	DATE
DESIGN-DETAILED	D. Myers	J. Legere	03/2024
CHECKED-REVIEWED	C. Helstrom	D. Myers	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SANFORD
U.S. RTE. 202 / RTE. 11

STREAMBED DETAILS

SHEET NUMBER

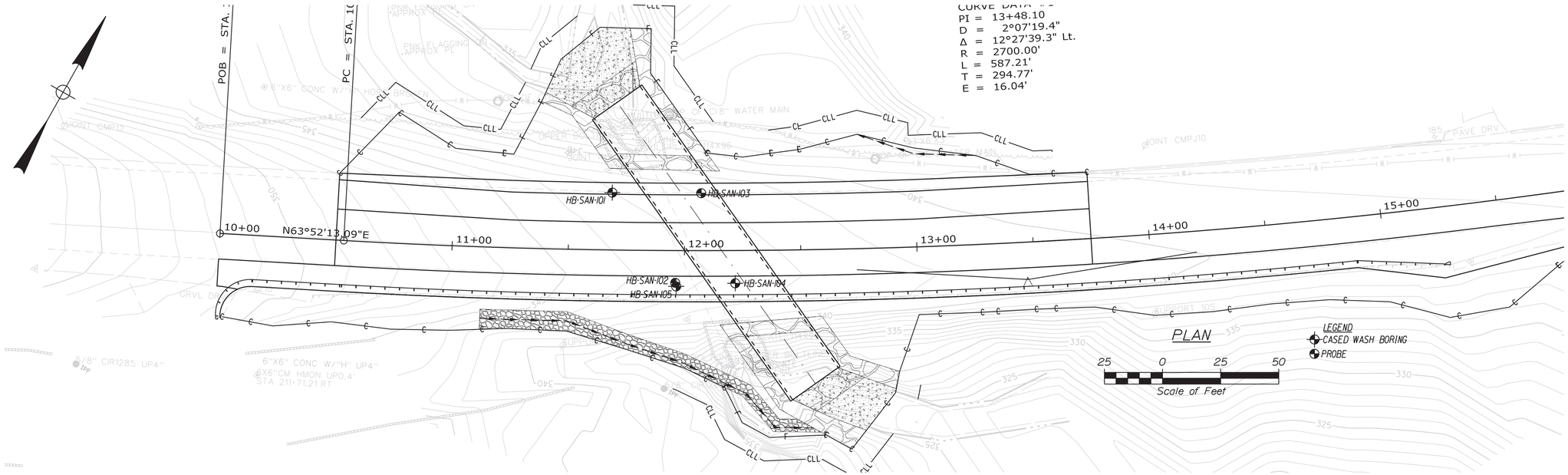
6

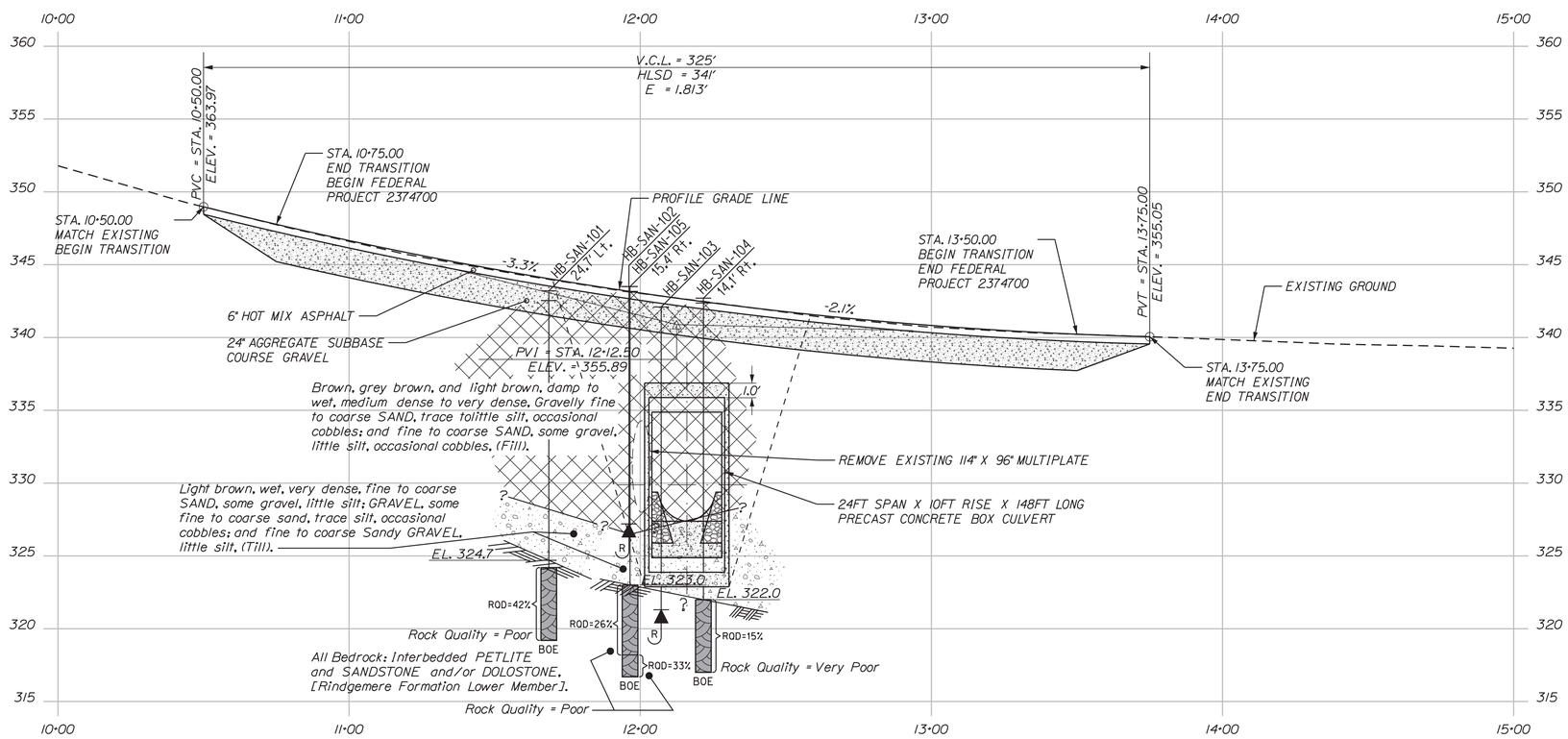
OF 20

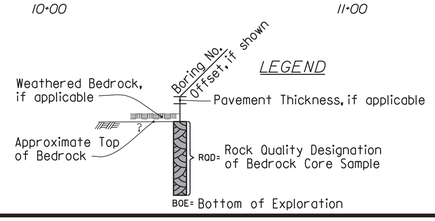
TYLin

Date:4/8/2024

Filename: ...\MSTA\xxx_Streambed_Det.dgn Division: HIGHWAY Username:







No Refusal
NR
Refusal
R

PROFILE
HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN 23747.00

HIGHWAY PLANS

STATE OF MAINE
Cody A. Russell
15866
LICENSED PROFESSIONAL ENGINEER

Cody A. Russell	SIGNATURE	
15866	P.E. NUMBER	
5/16/2024	DATE	

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2	C.RUSSELL	APR 2024
DESIGN3-DETAILED3	T.WHITE	
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SANFORD
ROUTE 202

BORING LOCATION PLAN &
INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER
7
OF 20

Filename: ...\GEOTECH\MSTA\002_BLP&ISP1.dgn Division: GEOTECH Username: Cody.A.Russell Date:5/16/2024

Filename: ...\MSTA\003_BORING LOGS1.dgn   Division: GEOTECH   Username: Cody.A.Russell   Date:4/1/2024

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 202	Location: Sanford, Maine	Boring No.: HB-SAN-101	WIN: 23747.00
Driller: MaineDOT	Elevation (ft.) 343.2	Auger ID/OD: 5" Solid Stem	
Operator: Daggett/Brooks	Datum: NAVD88	Sampler: Standard Split Spoon	
Logged By: B. Wilder	Rig Type: CME 45C	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 1/18/2023; 08:00-12:30	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"	
Boring Location: 11+68.6, 24.7 ft Lt.	Casing ID/OD: NW-3"	Water Level*: None Observed	
Hammer Efficiency Factor: 0.906	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in. Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	342.5	8" HMA. —0.7	
	1D	24/16	1.00 - 3.00	14/19/16/14	35	53			Brown, moist, very dense, Gravelly fine to coarse SAND, little silt, occasional small cobble, (Fill).	G#380788 A-1-b, SW-SM WC=5.1%
5	2D	24/15	5.00 - 7.00	10/60/12/10	72	109			Brown, moist, very dense, Gravelly fine to coarse SAND, occasional cobbles, (Fill).	
							36			
10	3D	24/18	10.00 - 12.00	8/10/3/10	13	20	12		Brown, wet, medium dense, fine to coarse SAND, some gravel, little silt, occasional small cobbles.	G#380789 A-1-b, SW-SM WC=12.6%
							25			
							31			
							52			
							30	328.2	—15.0	
15	4D	24/15	15.00 - 17.00	16/20/26/23	46	69	33		Light brown, wet, very dense, fine to coarse SAND, some gravel, little silt.	
							67			
							80			
							a100	324.7	a100 blows for 0.5 ft. —18.5	
20	R1	60/57	19.00 - 24.00	RQD = 42%			NQ-2		Top of Bedrock at Elev. 324.7 ft. Roller Coned ahead to 19.0 ft bgs. R1: Bedrock: Interbedded PELITE and SANDSTONE and/or DOLOSTONE [Ringgemere Formation Lower Member]. Rock Quality = Poor R1: Core Times (min:sec) 19.0-20.0 ft (2:35) 20.0-21.0 ft (3:40) 21.0-22.0 ft (5:17) 22.0-23.0 ft (4:40) 23.0-24.0 ft (5:18) 95% Recovery	
25								319.2	—24.0 Bottom of Exploration at 24.0 feet below ground surface.	

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: HB-SAN-101

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 202	Location: Sanford, Maine	Boring No.: HB-SAN-102	WIN: 23747.00
Drilling Contractor: MaineDOT	Elevation (ft.) 343.5	Auger ID/OD: 5" Dia.	
Operator: Daggett/Brooks	Datum: NAVD88	Sampler: N/A	
Logged By: B. Wilder	Rig Type: CME 45C	Hammer Wt./Fall: N/A	
Date Start/Finish: 1/18/2023-1/18/2023	Drilling Method: Solid Stem Auger	Core Barrel: N/A	
Boring Location: 11+96.1, 13.9 ft Rt.	Casing ID/OD: N/A	Water Level*: None Observed	

Definitions:
D = Split Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in. Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA		Probe, no material descriptions given.	
15							327.2	—16.3 Bottom of Exploration at 16.3 feet below ground surface. REFUSAL	

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: HB-SAN-102

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 202	Location: Sanford, Maine	Boring No.: HB-SAN-103	WIN: 23747.00
Drilling Contractor: MaineDOT	Elevation (ft.) 342.1	Auger ID/OD: 5" Dia.	
Operator: Daggett/Brooks	Datum: NAVD88	Sampler: N/A	
Logged By: B. Wilder	Rig Type: CME 45C	Hammer Wt./Fall: N/A	
Date Start/Finish: 1/19/2023-1/19/2023	Drilling Method: Solid Stem Auger	Core Barrel: N/A	
Boring Location: 12+07.2, 24.7 ft Lt.	Casing ID/OD: N/A	Water Level*: None Observed	

Definitions:
D = Split Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP= Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in. Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA		Probe, no material descriptions given.	
20							321.3	—20.8 Bottom of Exploration at 20.8 feet below ground surface. REFUSAL	

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: HB-SAN-103

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 202	Location: Sanford, Maine	Boring No.: HB-SAN-104	WIN: 23747.00
Driller: MaineDOT	Elevation (ft.) 342.7	Auger ID/OD: 5" Solid Stem	
Operator: Daggett/Brooks	Datum: NAVD88	Sampler: Standard Split Spoon	
Logged By: B. Wilder	Rig Type: CME 45C	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 1/19/2023; 08:00-11:30	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"	
Boring Location: 12+21.7, 14.1 ft Rt.	Casing ID/OD: NW-3"	Water Level*: None Observed	
Hammer Efficiency Factor: 0.906	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in. Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	342.4	4" HMA. —0.3	
	1D	24/18	1.50 - 3.50	13/22/16/15	38	57			Brown, damp, very dense, Gravelly fine to coarse SAND, little silt, occasional small cobbles, (Fill).	G#380790 A-1-b, SW-SM WC=4.9%
5	2D	24/20	5.00 - 7.00	13/19/19/14	38	57			Brown, damp, very dense, Gravelly fine to coarse SAND, little silt, occasional small cobbles, (Fill).	
10	3D	24/13	10.00 - 12.00	4/4/5/6	9	14	7		Brown, wet, medium dense, fine to coarse SAND, some gravel, little silt, occasional cobble.	
							14			
							17			
							66			
							63	327.7	—15.0	
15							122		Roller Coned ahead from 15.0-16.0 ft bgs. Boulder from 15.0-16.0 ft bgs.	
	4D	21.6/16	16.00 - 17.80	32/36/27/50(3.6)	63	95	62		Light brown, wet, very dense, GRAVEL, some fine to coarse sand, trace silt, occasional small cobbles.	G#380791 A-1-a, GW-GM WC=11.4%
							125			
							78		Cobble from 17.9-18.3 ft bgs.	
							109			
20	5D R1	8.4/6 60/57	20.00 - 20.70 20.70 - 25.70	25/50(2.4") RQD = 15%	---		a85 NQ-2	322.0	a85 blows for 0.7 ft. Light brown, wet, dense, fine to coarse Sandy GRAVEL, little silt. —20.7 Top of Bedrock at Elev. 322.0 ft. R1: Bedrock: Interbedded PELITE and SANDSTONE and/or DOLOSTONE [Ringgemere Formation Lower Member]. Rock Quality = Very Poor R1: Core Times (min:sec) 20.7-21.7 ft (2:51) 21.7-22.7 ft (2:30) 22.7-23.7 ft (2:38) 23.7-24.7 ft (2:22) 24.7-25.7 ft (3:02) 95% Recovery	G#380792 A-1-a, GW-GM WC=11.2%
25								317.0	—25.7 Bottom of Exploration at 25.7 feet below ground surface.	
30										
35										
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.
Page 1 of 1
Boring No.: HB-SAN-104

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 202	Location: Sanford, Maine	Boring No.: HB-SAN-105	WIN: 23747.00
Driller: MaineDOT	Elevation (ft.) 343.5	Auger ID/OD: 5" Solid Stem	
Operator: Daggett/Brooks	Datum: NAVD88	Sampler: Standard Split Spoon	
Logged By: B. Wilder	Rig Type: CME 45C	Hammer Wt./Fall: 140#/30"	
Date Start/Finish: 1/30/2023; 10:00-13:30	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2"	
Boring Location: 11+96.5, 15.4 ft Rt.	Casing ID/OD: NW-3"	Water Level*: 14.0 ft bgs	
Hammer Efficiency Factor: 0.906	Hammer Type: Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in. Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	343.2	4" HMA. —0.3	
	1D	24/13	1.00 - 3.00	5/12/11/10	23	35			Brown, moist, dense, Gravelly fine to coarse SAND, trace silt, occasional small cobbles, (Fill).	G#380793 A-1-a, SW-SM WC=5.9%
5	2D	24/18	5.00 - 7.00	7/6/10/24	16	24		337.5 337.3	Brown, moist, medium dense, Gravelly fine to coarse SAND, little silt, occasional small cobbles, (Fill). —6.0 Layer of Old Pavement from 6.0-6.2 ft bgs. —6.2 Cobble from 7.2-7.7 ft bgs.	
10	3D	24/17	10.00 - 12.00	3/3/6/9	9	14	8		Light brown, moist, medium dense, fine to coarse SAND, some gravel, little silt, old pavement, (Fill).	G#380794 A-1-b, SP-SM WC=8.4%
							14			
							50			
							61			
							65			
15	4D	24/16	15.00 - 17.00	7/7/15/31	22	33	9		Grey brown, wet, dense, Gravelly fine to coarse SAND, trace silt.	G#380795 A-1-a, SW-SM WC=10.6%
							38	326.5	—17.0 Cobble from 17.2-17.5 ft bgs.	
							82		Cobble from 17.8-18.0 ft bgs. Roller Coned ahead to 20.5 ft bgs.	
							242		Cobble from 18.7-19.1 ft bgs.	
							66			
20	5D R1	6/3 54/42	20.00 - 20.50 20.80 - 25.30	50 RQD = 26%	---		a98 NQ-2	323.0	a98 blows for 0.5 ft. Cobbles in Spoon. —20.5 Top of Bedrock at Elev. 323.0 ft. Roller Coned ahead to 20.8 ft bgs. R1: Bedrock: Interbedded PELITE and SANDSTONE and/or DOLOSTONE [Ringgemere Formation Lower Member]. Rock Quality = Poor R1: Core Times (min:sec) 20.8-21.8 ft (1:57) 21.8-22.8 ft (1:29) 22.8-23.8 ft (0:45) 4" seam 24.8-25.3 ft (2:00) Core Blocked 77% Recovery	
25	R2	18/12	25.30 - 26.80	RQD = 33%				318.2 316.7	—25.3 R2: Bedrock: Interbedded PELITE and SANDSTONE and/or DOLOSTONE [Ringgemere Formation Lower Member]. Rock Quality = Poor R2: Core Times (min:sec) 25.3-25.8 ft (1:02) 25.8-26.8 ft (2:16) 66% recovery —26.8 Bottom of Exploration at 26.8 feet below ground surface.	
30										
35										
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.
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Page 1 of 1
Boring No.: HB-SAN-105

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2374700
HIGHWAY PLANS
WIN 23747.00

STATE OF MAINE · Cody A. Russell · 15866 · LICENSED · PROFESSIONAL ENGINEER

Cody A. Russell
SIGNATURE
15866
P.E. NUMBER
4/1/2024
DATE

	BY	DATE
PROJ. MANAGER		
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2	C.RUSSELL	T.WHITE	APR 2024
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SANFORD ROUTE 202
BORING LOGS

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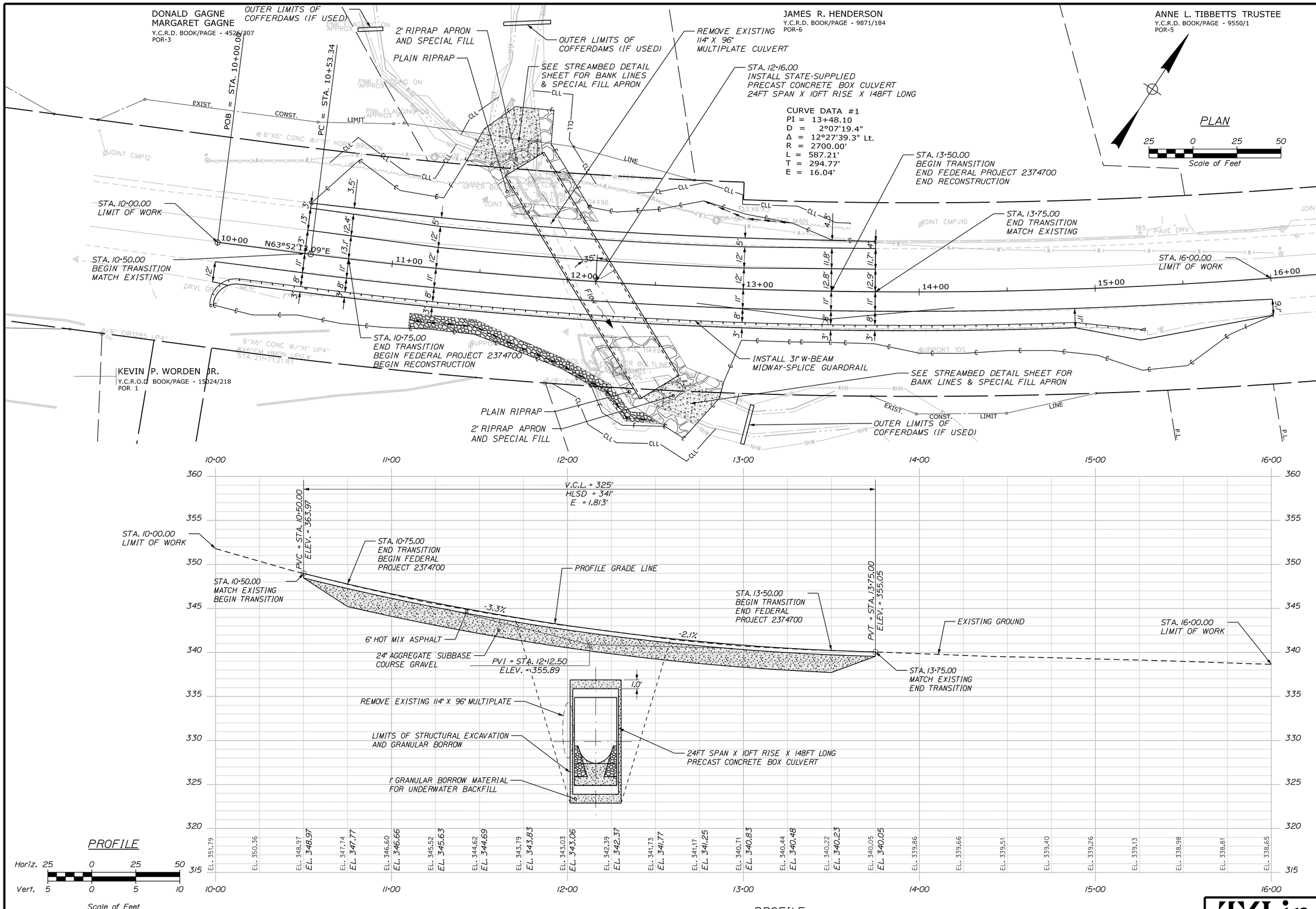

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN 23747.00

PROJ. MANAGER	L. HAMILTON		
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CHECKED-REVIEWED	D. Myers	C. Helstrom	03/2024
DESIGN3-DETAILED2			
DESIGN3-DETAILED3			
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REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

PLAN AND PROFILE

SHEET NUMBER
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OF 20

TYLin

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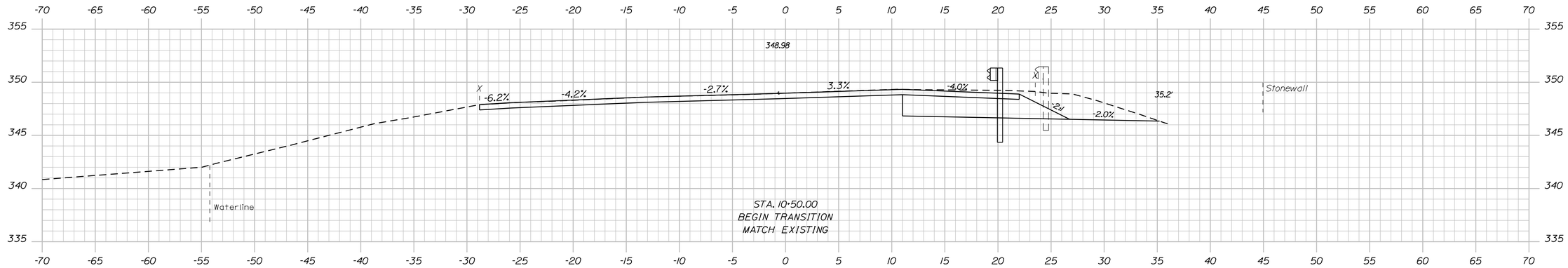

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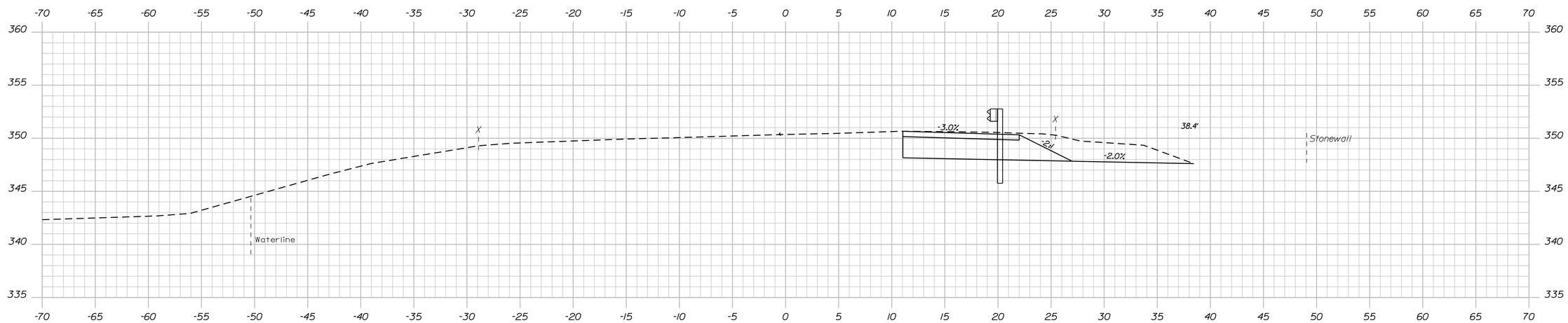

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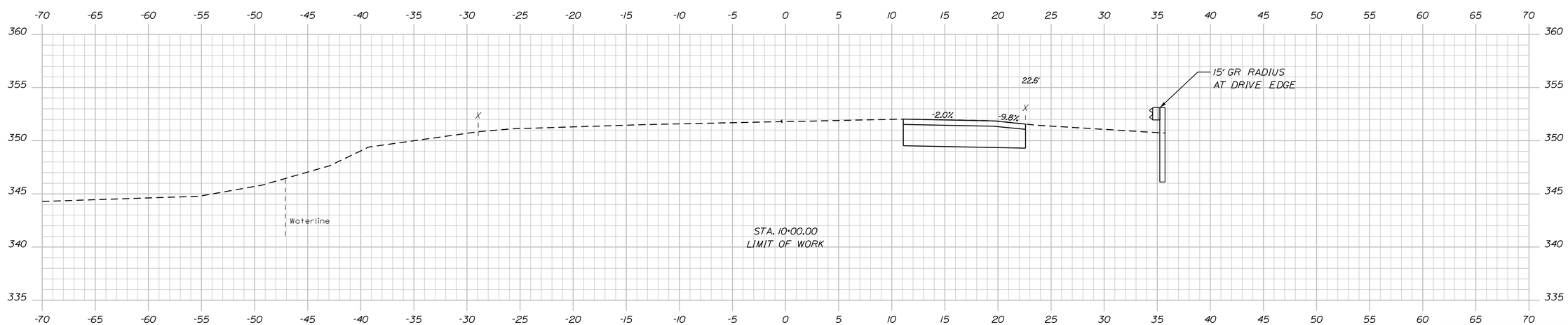

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TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	BY	DATE
CHECKED-REVIEWED	D. Myers	L. Soo	03/2024
DESIGN2-DETAILED2		C. Helstrom	03/2024
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

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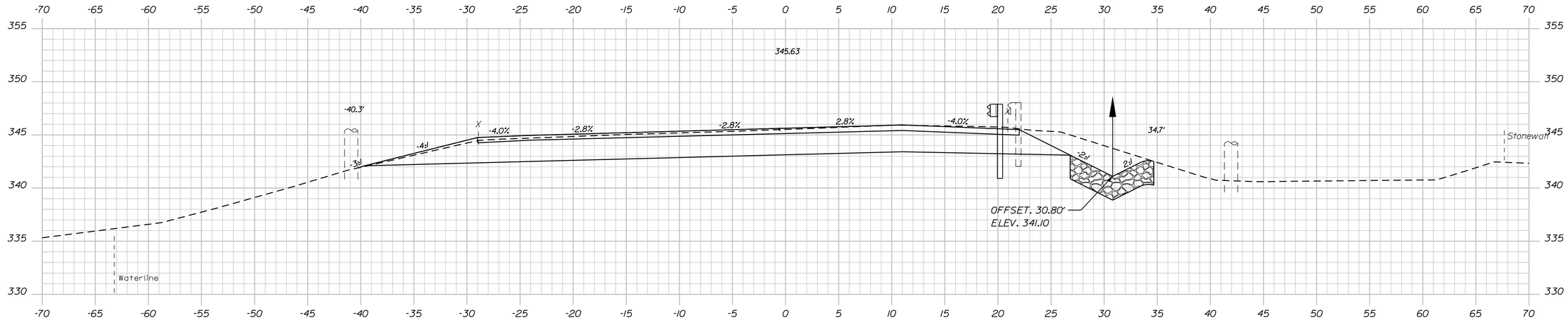

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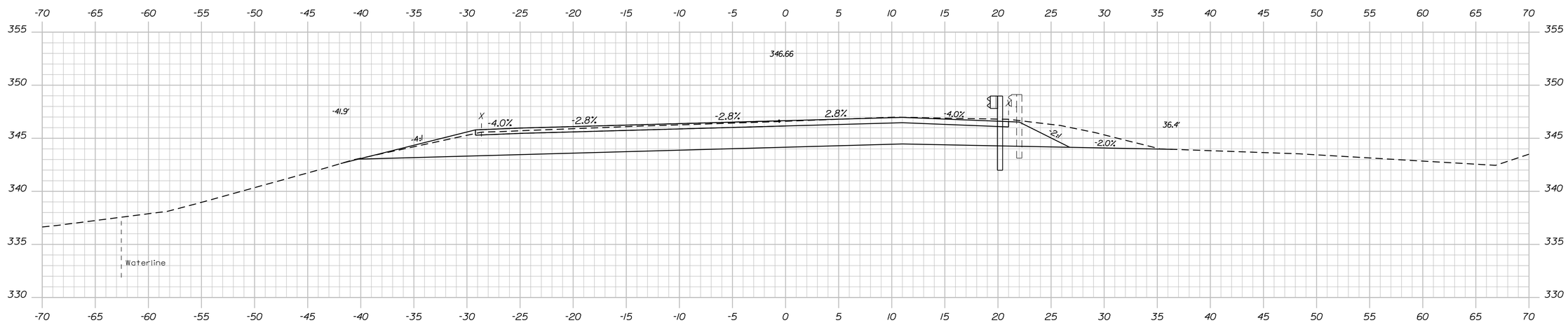

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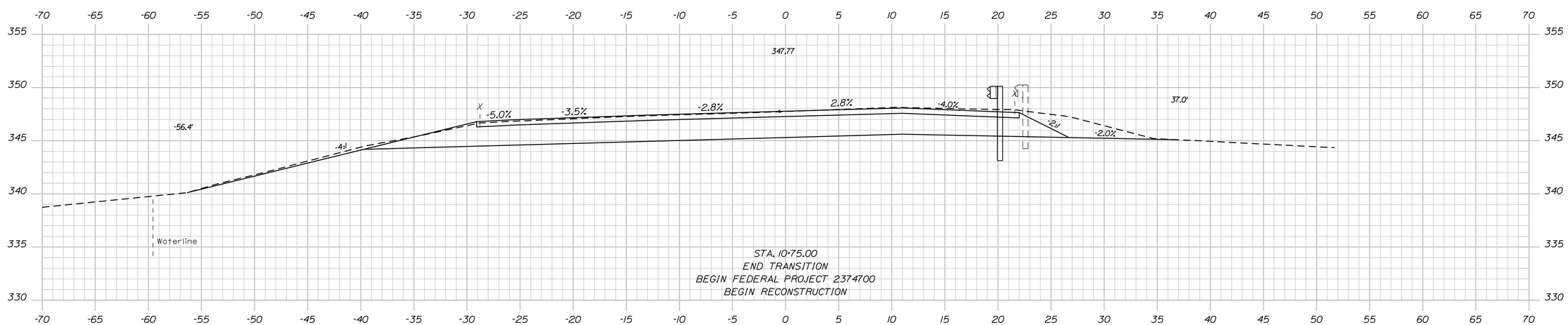

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TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	BY	DATE
CHECKED-REVIEWED	D. Myers	L. Soo	03/2024
DESIGN2-DETAILED2		C. Helstrom	03/2024
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

SHEET NUMBER

11

OF 20

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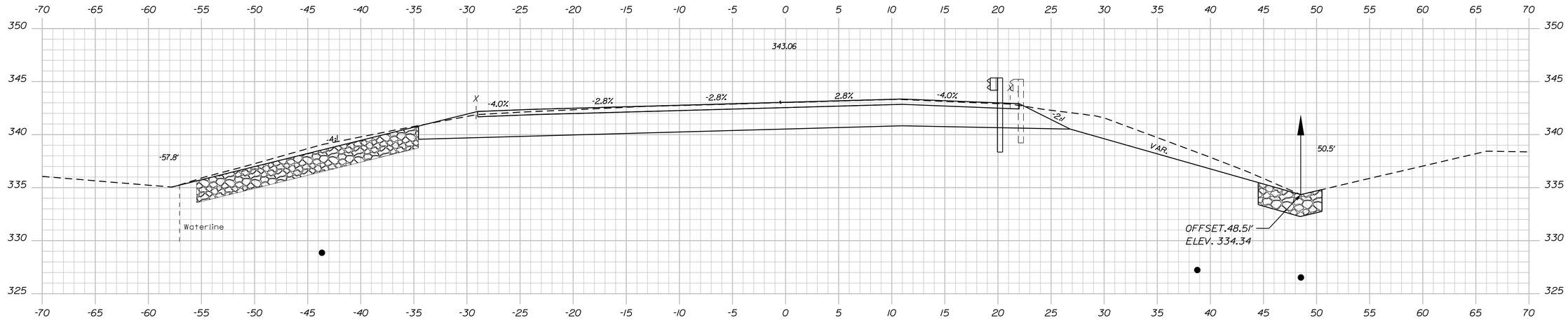

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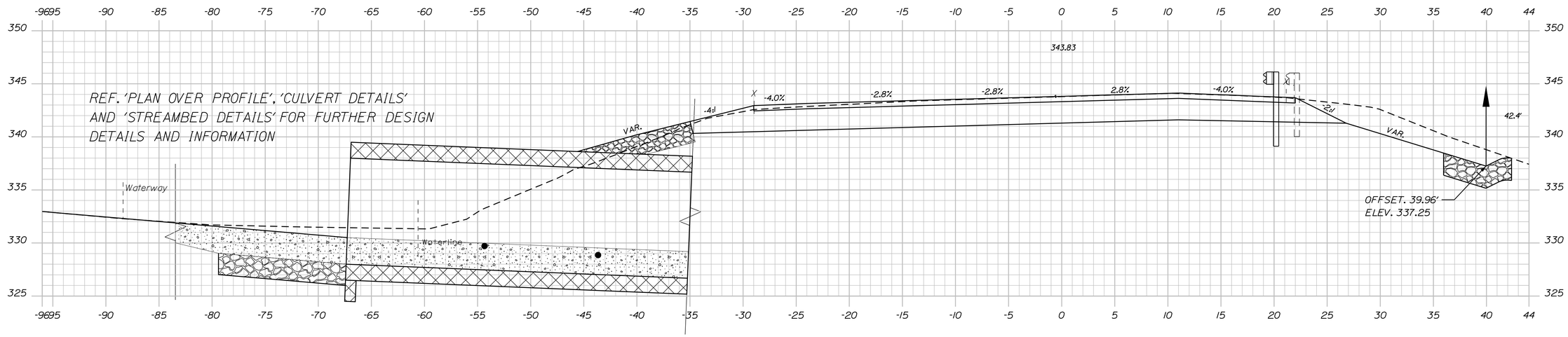

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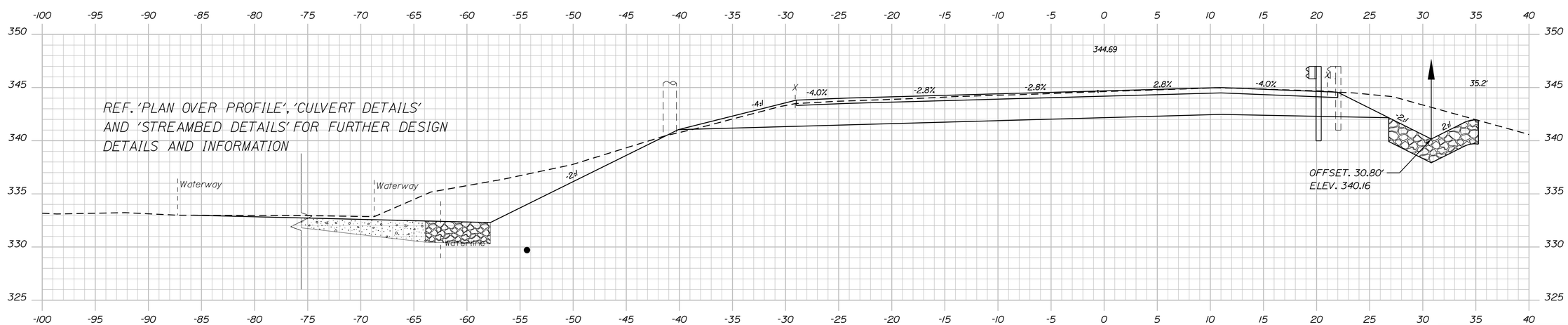

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TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

		BY	DATE
PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	L. Soo	03/2024
CHECKED-REVIEWED	D. Myers	C. Helstrom	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

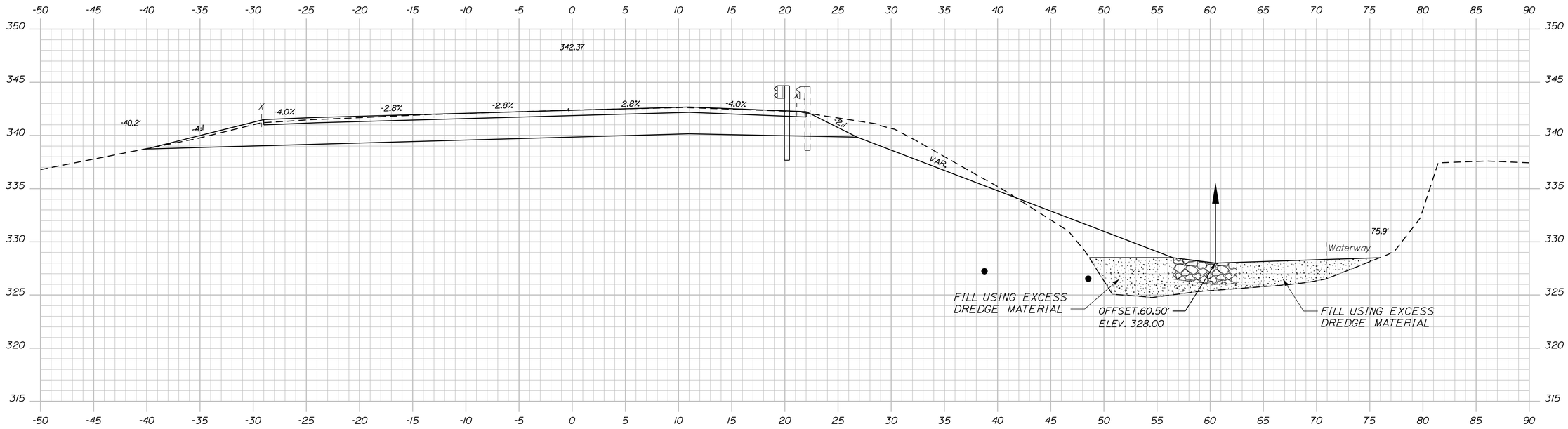
DATE

SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

SHEET NUMBER
12
OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024



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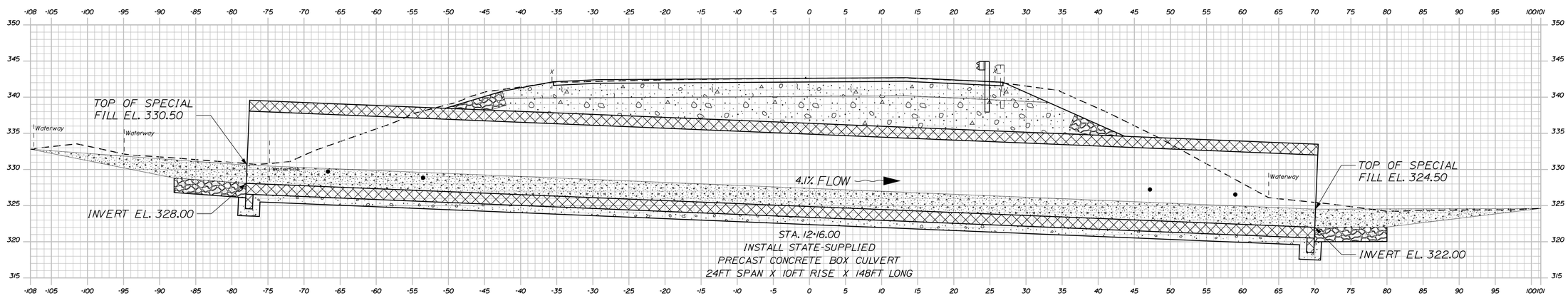


SKEWED SECTION ALONG CENTERLINE OF PIPE
12+16.00 (SKEWED 35° BACK LEFT)

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

		BY	DATE
PROJ. MANAGER	L. HAMILTON		
DESIGN-DETAILED	L. Soo	L. Soo	03/2024
CHECKED-REVIEWED	D. Myers	C. Helstrom	03/2024
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

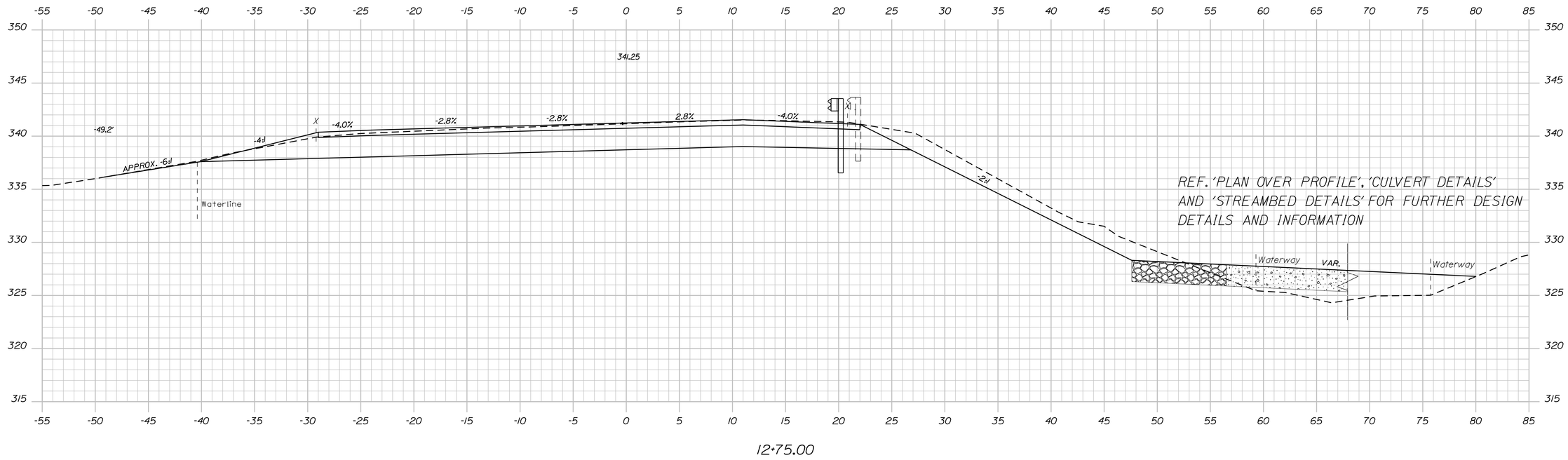
DATE

SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

SHEET NUMBER
13
OF 20

TYLin



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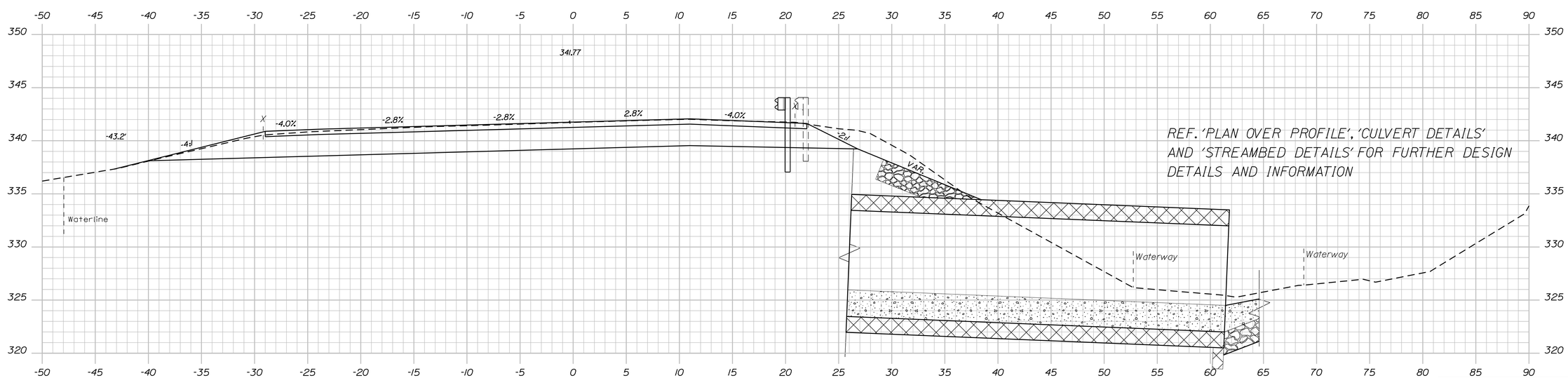

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TYLin

STATE OF MAINE
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2374700

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SANFORD
U.S. RTE. 202 / RTE. 11

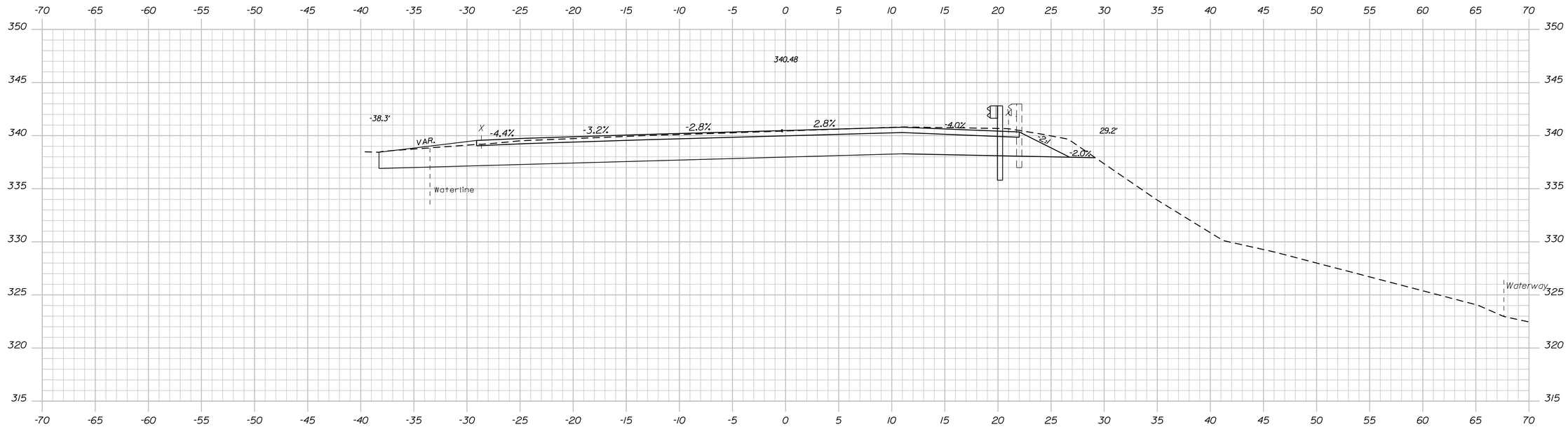
CROSS SECTIONS

SHEET NUMBER

14

OF 20

Date:4/8/2024 Username: Division: HIGHWAY Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn



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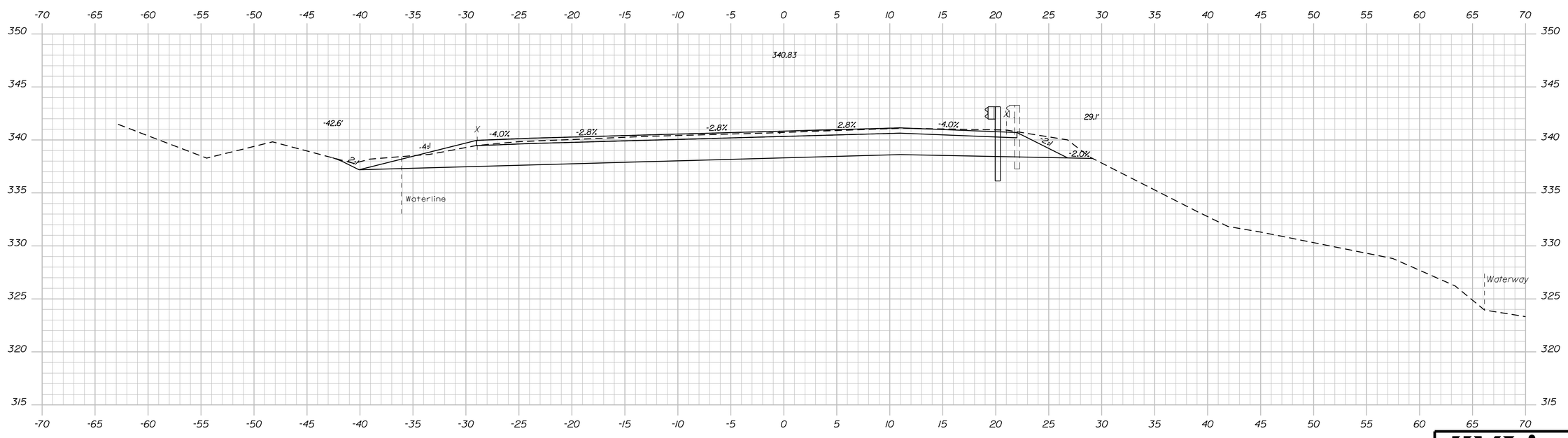

13+00.00

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

PROJ. MANAGER	L. HAMILTON		
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SANFORD
U.S. RTE. 202 / RTE. 11

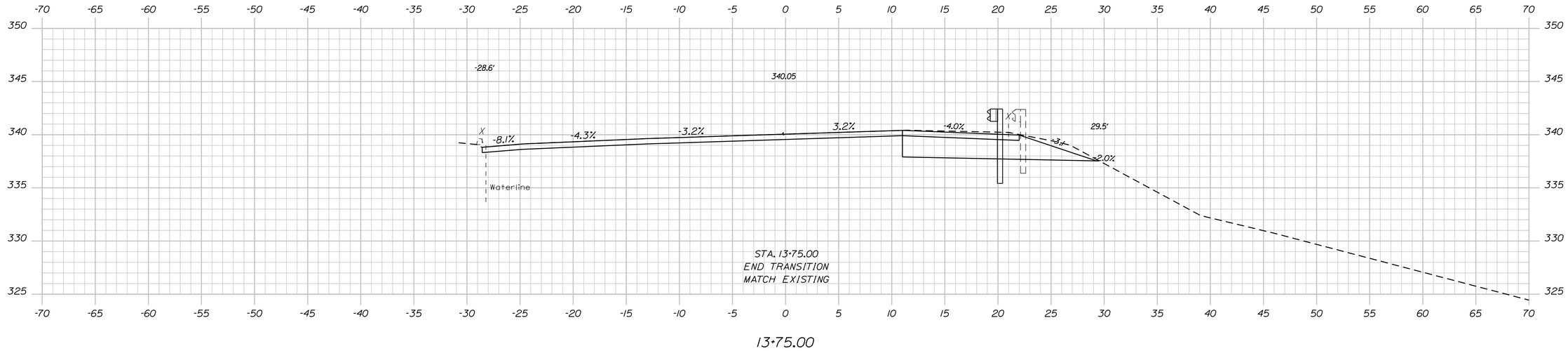
CROSS SECTIONS

SHEET NUMBER

15

OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024



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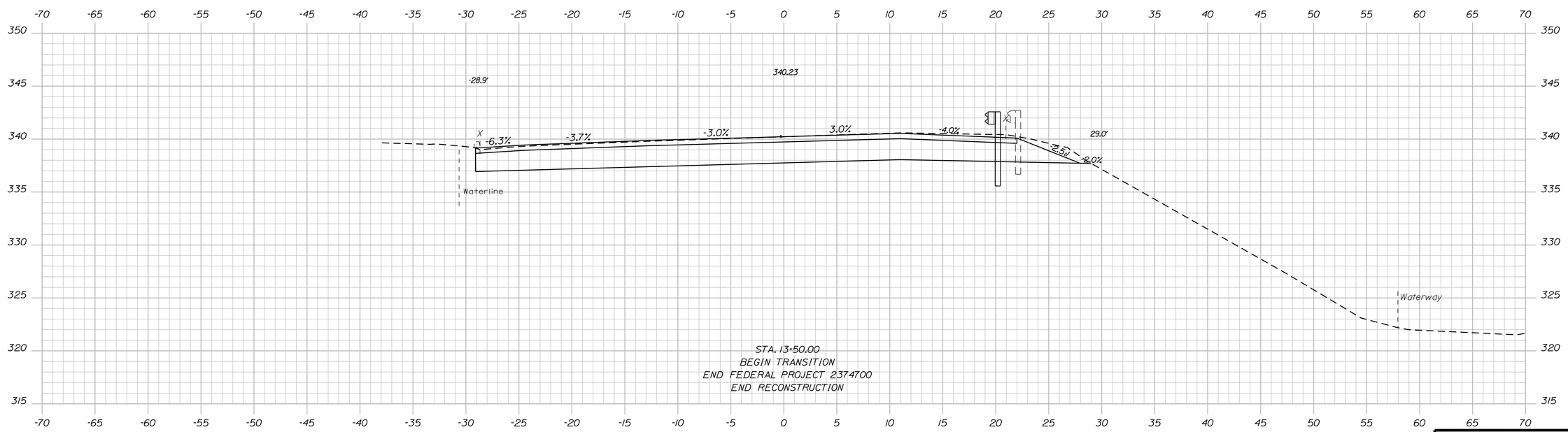

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TYLin

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2374700

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SANFORD
U.S. RTE. 202 / RTE. 11

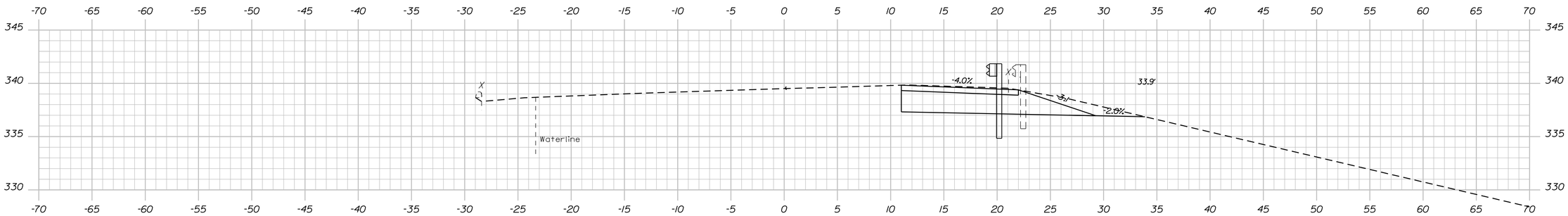
CROSS SECTIONS

SHEET NUMBER

16

OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024



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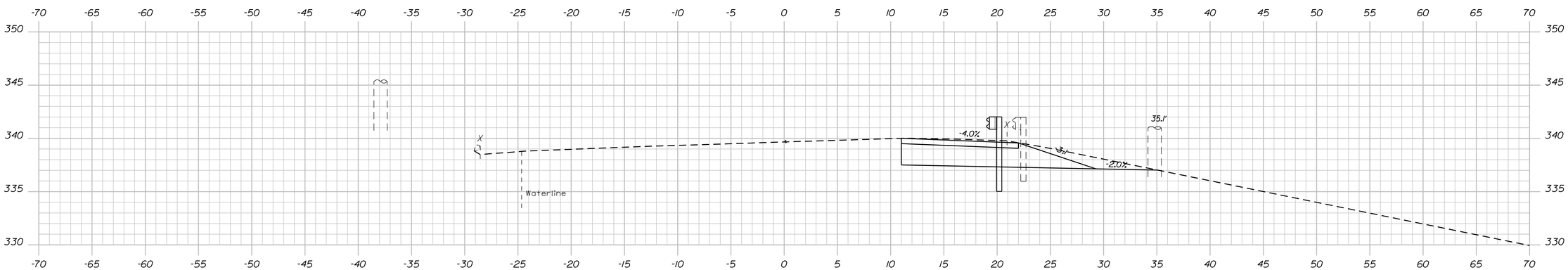

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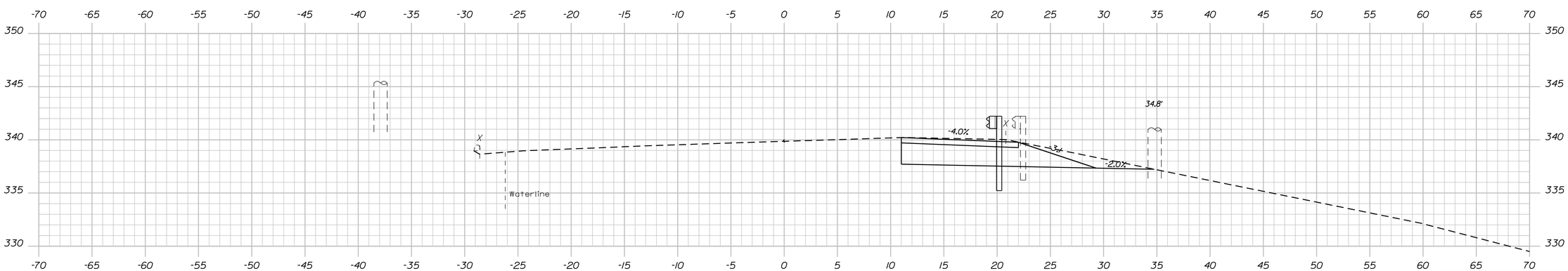

14+00.00

TYLin

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DEPARTMENT OF TRANSPORTATION

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SANFORD
U.S. RTE. 202 / RTE. 11

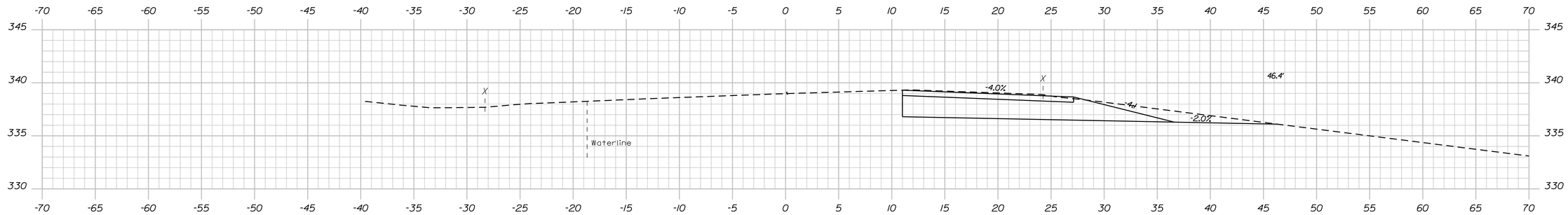
CROSS SECTIONS

SHEET NUMBER

17

OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024



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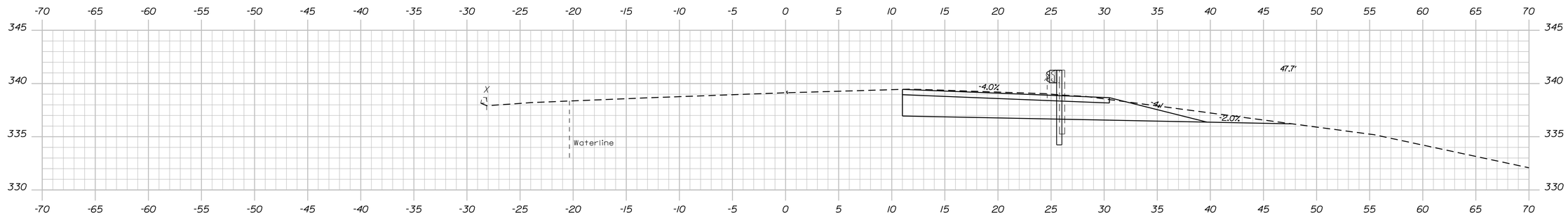

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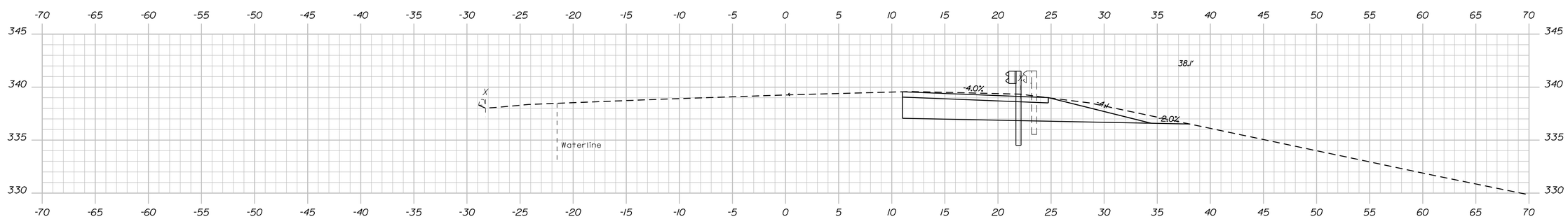

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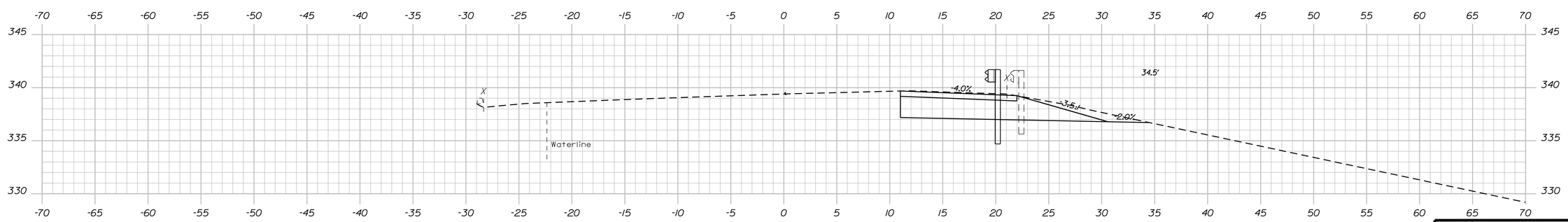

14+75.00

TYLin

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

PROJ. MANAGER	L. HAMILTON		
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SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

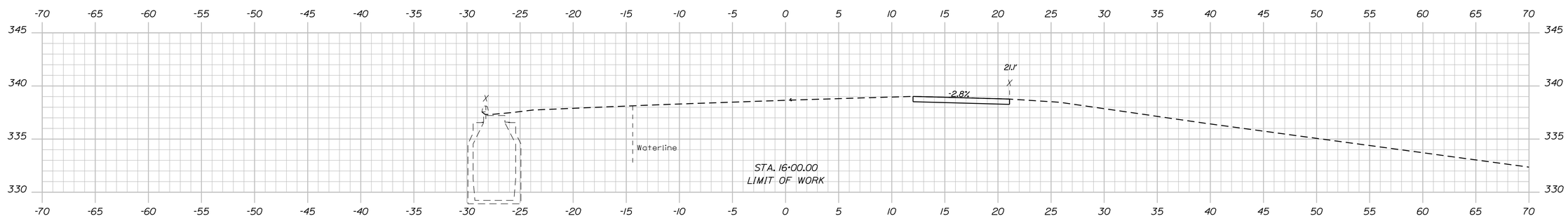
SHEET NUMBER

18

OF 20

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024

Filename: ...\HIGHWAY\MSTA\xxx_Xsect_01.dgn Division: HIGHWAY Username: Date:4/8/2024



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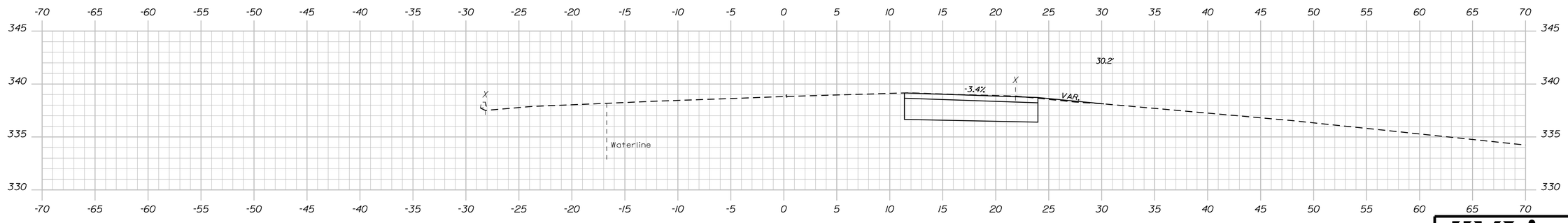

15+75.00

TYLin

PROJ. MANAGER	L. HAMILTON	BY	DATE
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CHECKED-REVIEWED	D. Myers	C. Helstrom	03/2024
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2374700

WIN
23747.00

SANFORD
U.S. RTE. 202 / RTE. 11

CROSS SECTIONS

SHEET NUMBER

19

OF 20

PLAN LEGEND

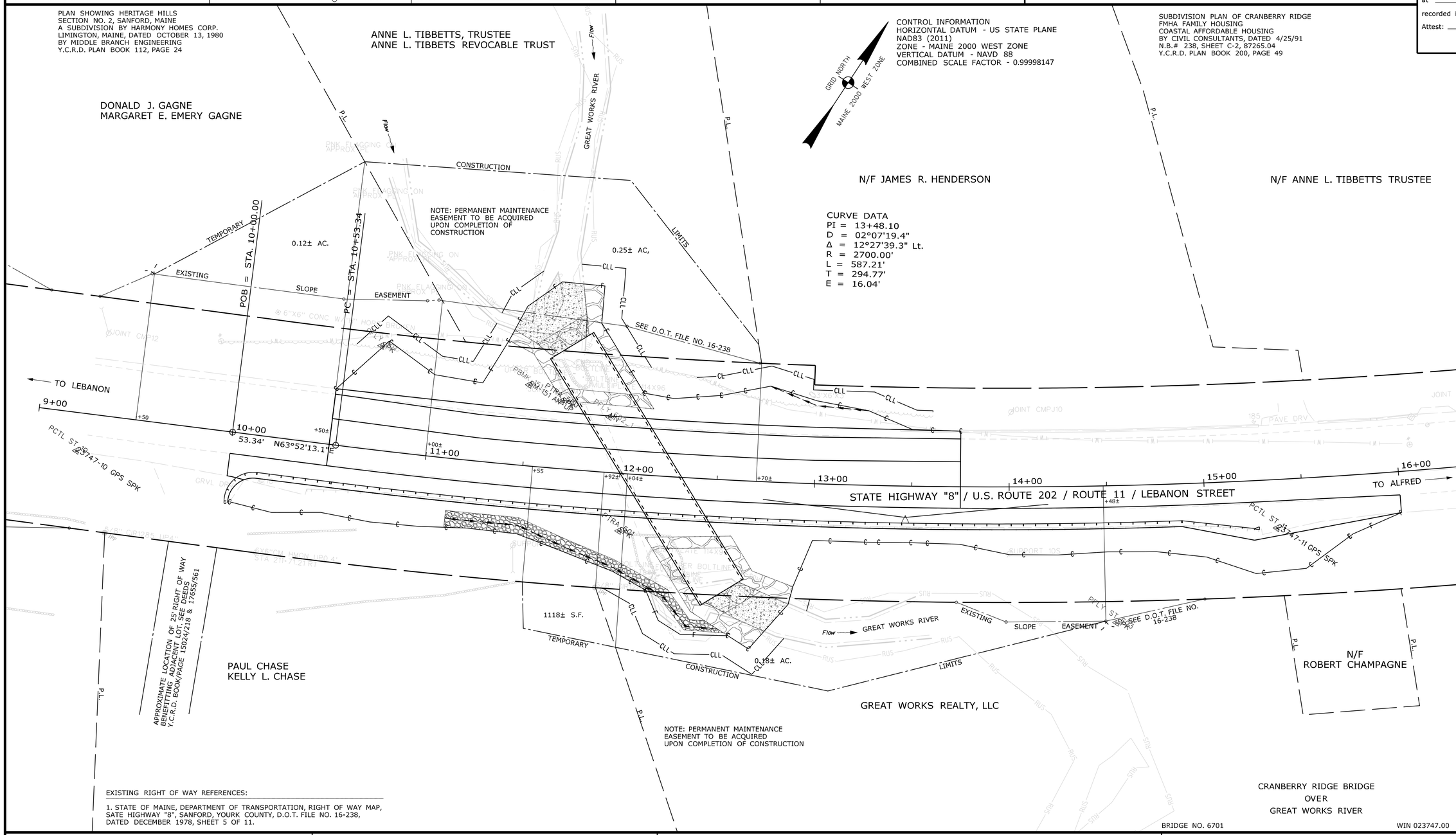
Town, County, State	New R/W Along Existing R/W	Existing / Proposed: Sanitary Sewer, Telephone Line, Electric Line, Water Line, Underdrain Line, Gas Line, Guardrail, Culvert	Existing / Proposed: Traveled Way, Ditch, Catch Basin, Manhole, Sewer Manhole, Utility Pole, Fire Hydrant, Curbing
Approx. Property Lines — P.L.	Building / Clearing Limit Line		Cut Line / Fill Line
Existing Right of Way	Trees: Conifer / Deciduous		Stonewall / Retaining Wall
Limits of Wrought Portion — L.O.W.P.	Tree Line / Bush Line		Baseline — 10+00, 11+00, 12+00
Control Of Access — C.O.A.	Water Edge		Monument / Traverse Point
New Right of Way	Ledge / Rock/Boulder / Flag Pole		Iron Rod Found — IRF / Pipe Found — IPF
New Easement	Fence: CHAIN LINK / BARB WIRE / STOCKADE		Replacement Pin Set
New Temporary Rights			
New R/W Within Existing R/W	Sign / Well / Mailbox		

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ABUTTING PROPERTY OWNERS.

25 0 25 50 75 100
Scale of Feet

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY _____
RECEIVED _____, _____
at _____h_____m_____M and
recorded in Plan Bk _____, Pg. _____
Attest: _____
REGISTER



EXISTING RIGHT OF WAY REFERENCES:

1. STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, RIGHT OF WAY MAP, SATE HIGHWAY "8", SANFORD, YOURK COUNTY, D.O.T. FILE NO. 16-238, DATED DECEMBER 1978, SHEET 5 OF 11.

PRELIMINARY PLAN

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	E.M.S.	C.W.K.
FINAL RIGHT OF WAY		
AREAS		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460

SANFORD
RIGHT OF WAY MAP

REVISIONS

NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK	PAGE	COUNTY RECORD			
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE

BRUCE A. VAN NOTE
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

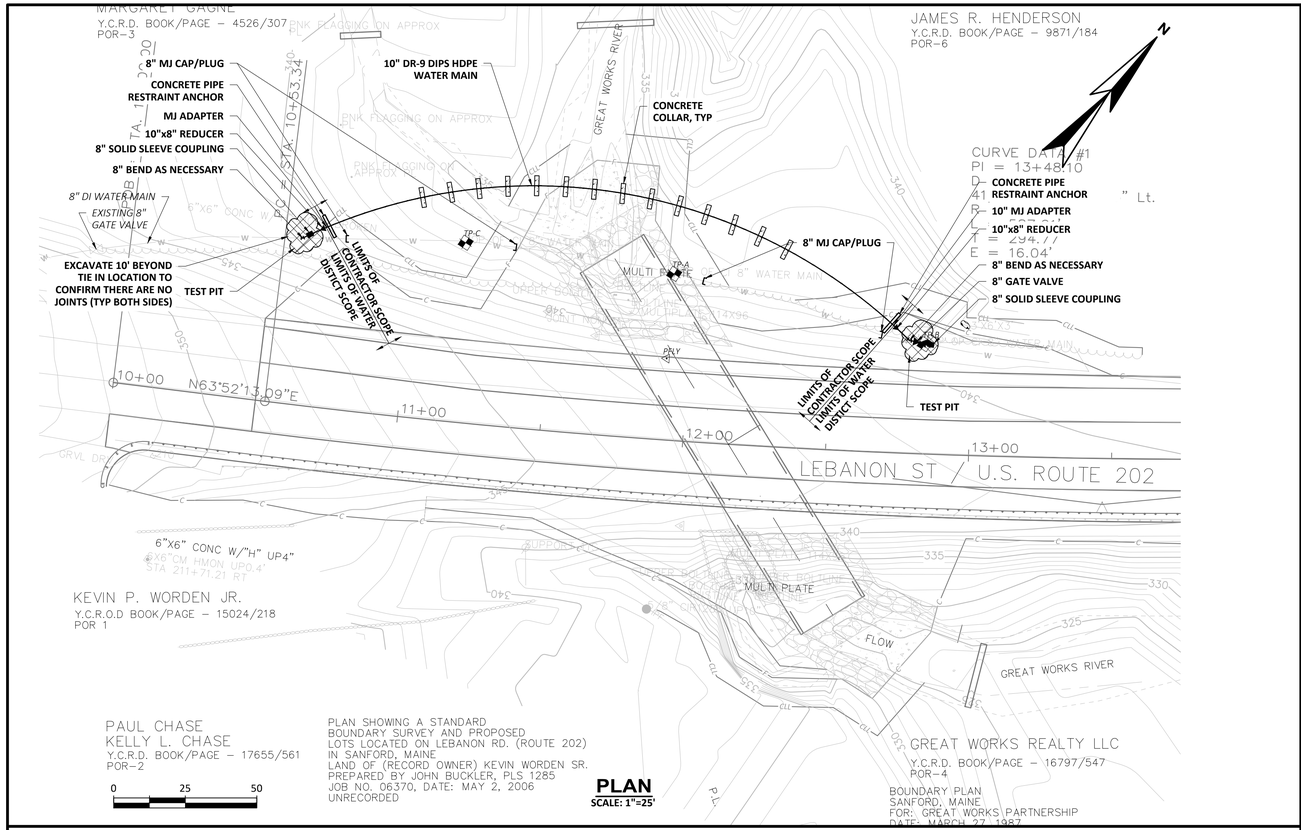
STATE HIGHWAY "8"
U.S. ROUTE 202 / ROUTE 11 / LEBANON STREET
SANFORD — YORK COUNTY
STATE PROJECT NO. 23747.00

APRIL 2024	RIGHT-OF-WAY MAP	D.O.T. FILE NO. TBD
SCALE 1" = 25'	SHEET 1 OF 1	

SHEET NUMBER
20
OF 20

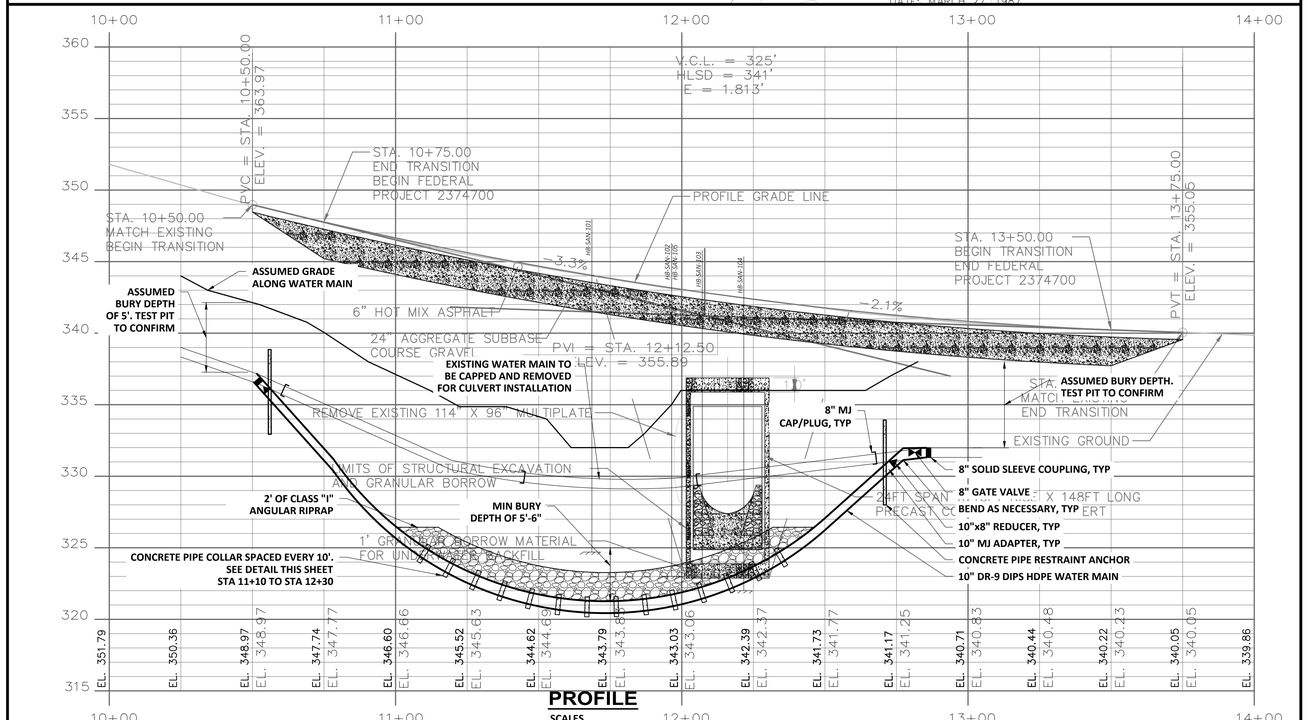
Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn Division: ROW Username: Jude.Hogan Date:5/14/2024

LAST SAVED BY: JAMES.MICHAUD 5/15/2024 7:51 AM



PLAN

SCALE: 1"=25'

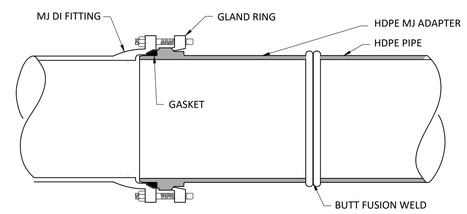


PROFILE

SCALES
VERT:1"=5'
HORIZ:1"=25'

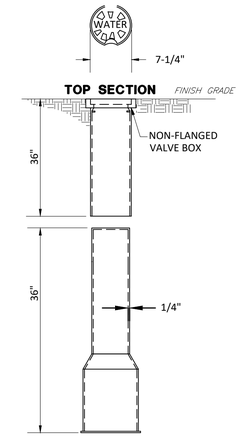
NOTES:

1. PROFILE SHOWN DOES NOT FOLLOW THE WATER MAIN ALIGNMENT BUT RATHER THE CENTERLINE OF THE ROAD. FINISH GRADE ALONG THE WATER MAIN ROUTE IS DIFFERENT THAN WHAT IS SHOWN ON THE PROFILE.
2. LEDGE EXCAVATION WITHIN THE PIPE TRENCH IS ANTICIPATED. MECHANICAL MEANS OF LEDGE REMOVAL VIA HOE RAM IS RECOMMENDED DUE TO THE PROXIMITY TO ACTIVE WATER MAIN AND RISK OF DAMAGE BY BLASTING. THE CONTRACTOR SHALL USE CAUTION WHEN REMOVING LEDGE AROUND EXISTING WATER INFRASTRUCTURE TO NOT DAMAGE ACTIVE WATER MAIN.
3. THE DISTRICT WILL PROVIDE AND INSTALL TEMPORARY WATER WITHIN THE LIMITS OF CONSTRUCTION IN ADVANCE OF THE PROJECT.



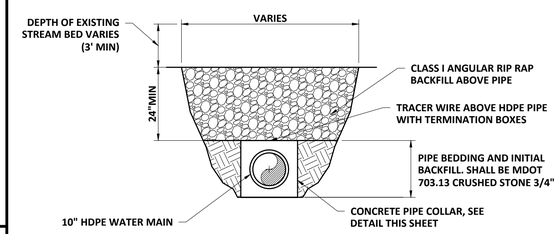
HIGH DENSITY POLYETHYLENE PIPE TO MECHANICAL JOINT CONNECTION DETAIL

SCALE: NTS



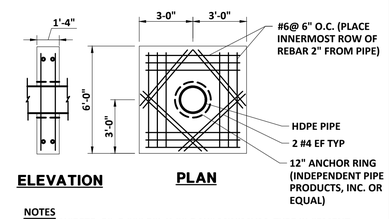
2-PIECE SLIDING VALVE BOX

NTS



STREAM CHANNEL WATER MAIN TRENCH

NTS

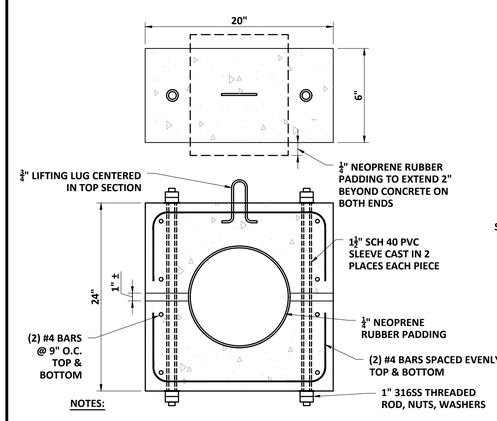


NOTES

1. CONCRETE: FC=5,000 PSI @ 28 DAYS MINIMUM, TYPE III CEMENT.
2. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATION: ASTM A-615 GRADE 60 BLACK DEFORMED BARS 2" MINIMUM COVER.

CONCRETE PIPE RESTRAINT ANCHOR

NTS



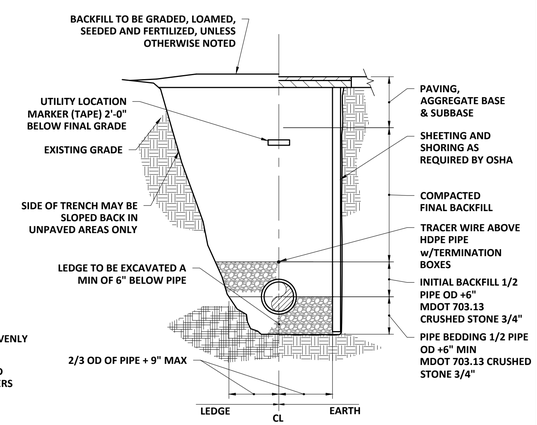
NOTES:

1. CONCRETE: FC=5,000 PSI @ 28 DAYS MINIMUM, TYPE III CEMENT.
2. STEEL REINFORCEMENT CONFORMS TO LATEST ASTM SPECIFICATION: ASTM A-615 GRADE 60 BLACK DEFORMED BARS 2" MINIMUM COVER.
3. 1" ANCHOR RODS, NUTS, AND WASHERS ARE 316 STAINLESS STEEL. 26" LENGTHS PROVIDED, TO BE FIELD CUT BY CONTRACTOR. QUANTITY OF NUTS AND WASHERS SUPPLIED TO INSURE DOUBLE NUTTED ENDS.
4. SUPPLIED WITH 2 PIECES COMMERCIAL GRADE NEOPRENE RUBBER (PER SIDE) 1,000 PSI TENSILE STRENGTH, BLACK, SHORE A50 DUROMETER HARDNESS.
5. MAXIMUM PIPE OD FOR THIS ANCHOR IS 11".
6. ESTIMATED WEIGHT IS 150 LBS (BASED ON HOLE SIZED FOR MAXIMUM PIPE OD).
7. TO BE ASSEMBLED BY CONTRACTOR.
8. SPACED EVERY 10' ALONG HDPE WATER MAIN WITHIN STREAM CHANNEL.

CONCRETE PIPE COLLAR

SCALE: 'NTS'

NTS



NOTES:

1. ALL EXCAVATION MUST MEET OSHA STANDARDS.
2. INSTALL 3 FOOT LONG IMPERVIOUS MATERIAL DAM IN BEDDING/INITIAL BACKFILL MATERIAL EVERY 100' AND WHERE SHOWN ON PLANS TO PREVENT TRENCH GROUNDWATER FROM BEING CHANNELED ALONG BEDDING/INITIAL BACKFILL.

PIPE TRENCH BEYOND STREAM CHANNEL

SCALE: "NTS"

NO	REVISIONS	APP'D	DATE
1			
2			
3			
4			
5			
6			

PROJECT NO: T18002
DESIGNED: D.LACOMBE
CAD COORD: J.MICHAUD
CAD: J.MICHAUD
CHECKED:
DATE:
APPROVED:
DATE:
SUBMISSION:

STATE OF MAINE
DUSTIN J. LACOMBE
No. 15226
PROFESSIONAL ENGINEER
5/17/2024

WRIGHT-PIERCE
207.725.8721 | www.wright-pierce.com
11 BOWDOIN MILL ISLAND, SUITE 140, TOPSHAM, ME 04086

SANFORD, MAINE
ROUTE 202 WATER MAIN

PLAN AND PROFILE

DRAWING
C-1

J:\ENG\ME\SANFORD\WO\T18002-RT202CULVERTWIRELOCATION_DRAWINGS\CIV\T18002-CS-PLANPROFILE.DWG | T18002-CS-PlanProfile | 12.5849 | --- | 5/15/2024 7:53:00 AM | JAMES.MICHAUD